

BUTANE-PROPANE

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HEADQUARTERS FOR LP-GAS
INFORMATION SINCE 1931

News

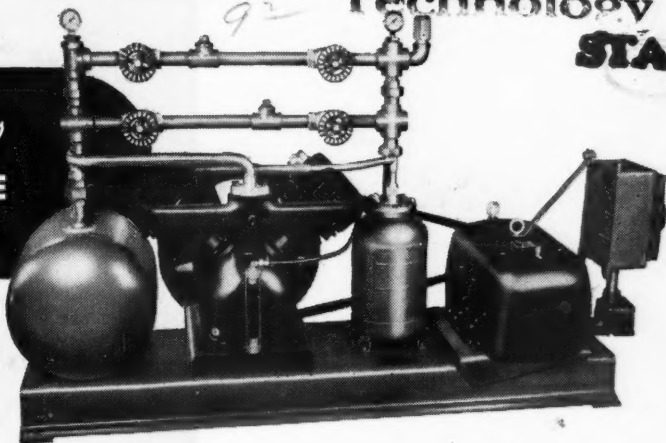
Bench

Technology

STAC

Save the Gas
**YOU NOW GIVE
AWAY**

See a Roney
**FOR DIFFERENTIAL
Compressor**



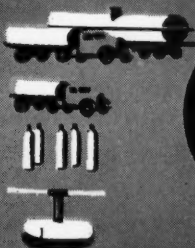
From each tank car you unload, the Roney vapor differential compressor saves you up to 250 gallons of gas that you now lose. This is gas that remains in the tank in vapor form . . . gas a pump can't transfer. The Roney vapor differential compressor recovers the maximum amount of this vapor and transfers it

rapidly and economically. It will pay for itself in a very short time.

Roney, the original vapor differential compressor, is available in four sizes, with liquid transfer rates from 40 to 400 gpm. Delivery in 30 days on most models. Write for information and prices today. Typical Bulk Plant layouts sent on request.

USED FOR

**UNLOADING
LOADING
FILLING
RAISING**



L.C. RONEY INC.

511 S. Redondo Blvd., Inglewood, California

JULY, 1947

ALL-ROUND Hackney Cylinders

Are Designed For
Lower Maintenance Costs

V. 8, no. 7-12
July-Dec. 1947
R



Improved Circumferential Weld



"Scalloped"
Foot Ring



Depth-Controlled
Stamping



Low maintenance cost is an important consideration in buying cylinders. It's one of the reasons why Hackney Cylinders have been preferred in the industry. With such features as minimum seam area, X-ray controlled welding, adequate strength . . . minimum maintenance costs were assured.

And now these low maintenance costs are even lower! For Hackney Cylinders have a "scalloped" foot ring—without hard-to-clean crevices—designed to permit thorough inspection and assure faster and more complete cleaning. Naturally, labor costs are reduced.

This strong cylinder has been made sturdier. For the new foot ring is stronger. Then there is a new finishing process which assures a longer lasting finish. It permits a better bond between paint and cylinder, or a better surface for galvanizing.

The depth-controlled method of stamping is accurate, legible and uniform. It was developed especially for Hackney Cylinders by Pressed Steel Tank Company.

In the complete line of Hackney L-P Cylinders you will find a container to meet every requirement.

Pressed Steel Tank Company
Manufacturers of Hackney Products

Hackney
MILWAUKEE

Main Office and Plant 1487 S. 46th St., Milwaukee 14

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552 Roosevelt Bldg., Los Angeles 14 • 227 Hanna Bldg., Cleveland 15

CONTAINERS FOR GASES, LIQUIDS AND SOLIDS

ANCHORGAS DISTRIBUTORS ARE SELLING THEIR CUSTOMERS
ON LARGER STORAGE... AND HERE'S HOW

PA, WITH THIS LARGER STORAGE TANK
OUR ANCHORGAS WILL LAST ALL WINTER



FOR YOUR YEAR 'ROUND REQUIREMENTS

Anchorgas

A name famous for highest
quality Butane - Propane

ANCHOR
PETROLEUM COMPANY
TULSA, OKLAHOMA

EXPORT DIVISION: ANCHOR OIL CO., HOUSTON, TEXAS

JULY — 1947

TECHNOLOGY
1306880

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BUTANE-PROPANE News

Reg. U.S. Pat. Off.

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LOG BUTANE-PROPANE APPLIANCES
AND EQUIPMENT.



BUTANE-PROPANE News

SELL

Specialized Tools

TO PROMOTE AND RETAIN SALES,
FOR MASS-FEEDING, RECOMMEND

BLODGETT



THIS KITCHEN, serving 30,000 meals monthly, is a "Specialized Cooking Tool" installation, with a No. 959 Blodgett Oven combining in 27.6 square feet of deck area both roasting and baking, 2 skeleton-top ranges with open extension between, and a ceramic salamander • Equipment cost was \$1020, heat input is 272,000 Btu. • Compare that with "yesterday's" conventional set-up . . . requiring four ranges and a bake oven, at an equipment cost of \$1600, with more than double the heat input! (And that's not even considering the greater flexibility and operating ease, better performance and fatigue-elimination of the "Specialized" Blodgett Oven installation!)



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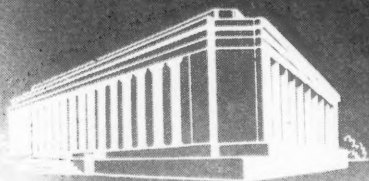
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One Commercial
Cooking Job
Equals
20 Domestic
Cooking Jobs!

Improved **WELDING TECHNIQUES**

**developed in
Scaife Research
Laboratories.....**



Scaife LP-Gas Cylinders are *uniformly dependable always* because of the accomplishments of Scaife's Fellowship at the Mellon Institute of Industrial Research and our laboratory at Oakmont. The technician shown in the insert above is making a study of welding equipment and materials. As new techniques are developed or processes improved, they are applied to actual plant operations. Thus Scaife Cylinders are always "up-to-date" in materials, designs and methods.

This planned research program is constantly working for you—assuring you that Scaife products are always of uniformly high quality—and safest for all LP-Gas requirements.

DISPLAYS AND SIGNS

DIRECT MAIL AND LITERATURE

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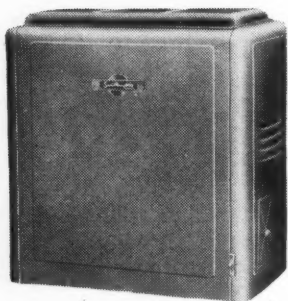
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SELECTION AND TRAINING**

HOME SERVICE MATERIALS

LOCAL ADVERTISING MATERIALS

GAS Refrigerator

EVANSVILLE 20, INDIANA



VENTED CIRCULATOR

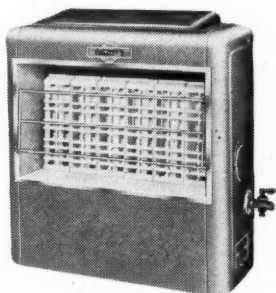
• COSTS YOUR CUSTOMERS LESS

• KEEPS THEM WELL SATISFIED

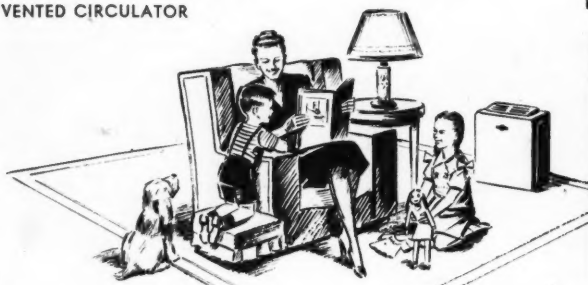
• MAKES YOUR SELLING EASIER

• IDEAL WITH ALL TYPES OF GAS

• DELIVERIES CAN BE ASSURED



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UNVENTED CIRCULATOR

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Write or Wire Today!

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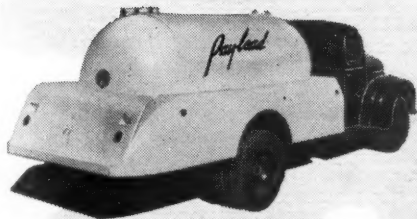
GARLAND, DALLAS COUNTY, TEXAS

THE

Payload

BUSY BODY

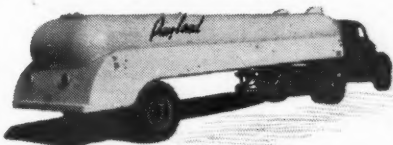
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Geared for Smooth, Dependable and Lasting Performance, the **PAYLOAD** Truck Tanks are a **PERFECT DESIGN** of **LIGHTER WEIGHT** and **STRONGER BODY!**

What Does This Mean to You?

It means that your operating costs are **DECREASED**; that your **PAYLOAD** is **INCREASED**. The **PAYLOAD TRUCK TANK** is famous for **GREATER Tire Mileage . . . Less Repairs . . .** and for all the Scientific Weight-Relieving Features that assure you of a Superior, Dependable **TRANSPORT**.



PAYLOAD Trailer Transports come equipped with Standard Forge Spring Suspension Single Axle, or with the Tandem Dual Axle UNIT. Perfect engineering provides better braking, eliminates wheel bounce, combines heavy duty with **LIGHTER WEIGHT** and Improved Efficiency with **LESS OPERATING COSTS**.

WE WILL SEND Descriptive pamphlet upon request . . . Write for it!

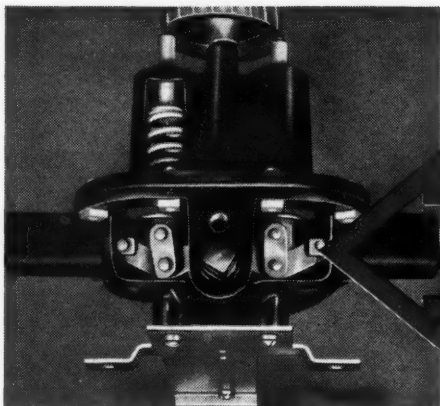
Southland Steel Company, Inc.

5219 Maple Avenue

Dallas, Texas

JULY — 1947

RELAY TOGGLE



FIRST STAGE OF REGULATION

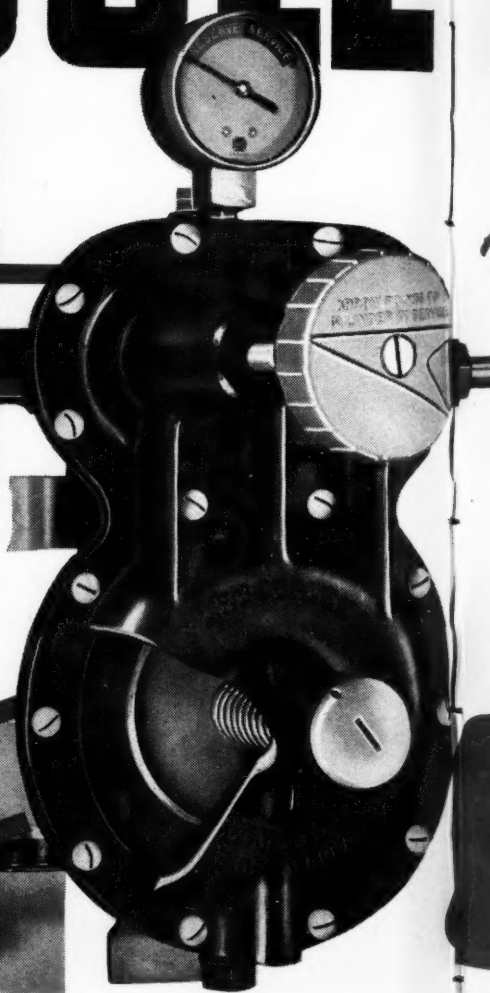
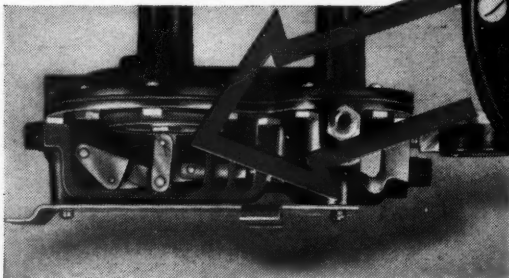
Cylinder pressure reduced to uniform pounds pressure. Toggle Action provides extra power to force valve plunger against valve seat forming tight seal under all field conditions.

SECOND STAGE OF REGULATION

Further reduces pressure to 11 inches water column. Extra power of toggle-action insures tight closing of valve and elimination of pressure build-up.

SERVICE INDICATOR

When service cylinder is empty, reserve cylinder cuts in automatically. Indicator pointer moves from service to reserve indicating that one cylinder is empty. (Remote indicating gauge available).



ANCE

E ACTION

GIVES "MULTIPLIED POWER" IN 2 in 1 AUTOMATIC CHANGE-OVER REGULATOR

Meeting the LP Gas Industry's demands for improved equipment to permit improved service, American Meter Company offers the DBP Automatic changeover Regulator for more sensitive, positive, uniform control of two-cylinder gas systems.

COMBINES AUTOMATIC HEAD, POUNDS-TO-INCHES REGULATOR, AND SAFETY RELIEF VALVE IN SAME HOUSING

SIMPLER INSTALLATION. ONE UNIT INSTEAD OF TWO

AUTOMATIC HEAD DRAWS ONLY FROM ONE CYLINDER AT A TIME

INSURES COMPLETE EMPTYING OF CYLINDER BEFORE BEING REMOVED

SWITCHES AUTOMATICALLY TO RESERVE CYLINDER WHEN SERVICE CYLINDER IS EMPTY PERMITTING UNINTERRUPTED SERVICE

MAKES SERVICING EASIER AND MORE CERTAIN

TOGGLE-ACTION, UNDER ADVERSE CONDITIONS, CUTS CUSTOMER COMPLAINTS AND REDUCES MAINTENANCE COSTS

Meters to Meet Every Market Requirement of LP Gas

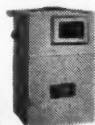
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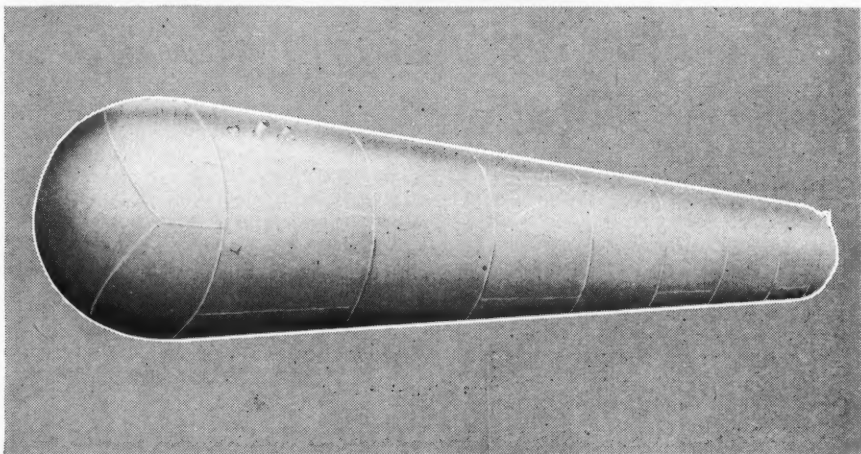
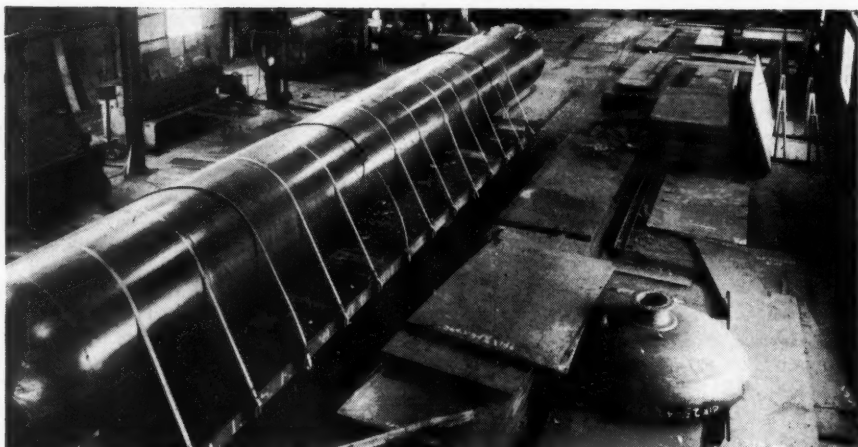


American LP Gas
Meter, Type 3-A



American LP Gas
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Large capacity meters
are available for commercial and industrial
installations



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BUTANE-PROPANE BULK STORAGE TANKS

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Columbian Above-ground and Underground Storage Tanks are available in all sizes . . . all A.S.M.E. tanks. Write today.

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(Right) Columbian Full-Skirted Standard LP-Gas Delivery Truck with special cylinder brackets for bottled gas. Pump mounted with direct driven power take-off. All control valves and print-o-meter in rear can box.



WRITE now for complete information.

COLUMBIAN STEEL TANK CO.

P. O. Box 4226-O

Kansas City, Mo.

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UNIT REPLACEMENT PLAN SAVES METER REPAIRS IN THE FIELD

SAVES YOU MONEY... SAVES YOU TIME

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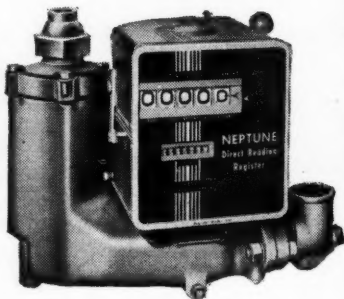
So in order to keep your meter operations at the peak of dependability over a long period of time, with sustained accuracy, and to make your Red Seal Meter investment one of complete satisfaction, we established the Unit Replacement Plan. This plan allows you to exchange the following parts for guaranteed factory rebuilt replacements at a nominal cost—

**Register
Gear Train**

**Measuring Chamber
Vapor Release Unit**

Adequate stocks of these unit replacement parts are kept on hand at our strategically located branches and petroleum equipment jobbers. In this way you have no expensive rebuilding or repairing to do in the field. Your meters are kept in continuous service, you save money, time and temper.

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NEPTUNE RED SEAL METERS

Accuracy you can bank on

NEPTUNE METER COMPANY, 50 WEST 50th STREET, NEW YORK 20, N. Y.

IN PRODUCTION NOW!

Regulation I. C. C. Cylinders

Stress Relieved

X-Ray Controlled

Automatically Welded

Everything for the L.P.G. Dealer in the pressure vessel line from 5 gal. cylinders to 30,000 gal. storage tanks. Including domestic systems, cylinders, truck tanks, skid tanks, storage tanks and refinery equipment.



**100 Lb.
Size**

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Size**



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Inspected by
THE HARTFORD STEAM BOILER INSPECTION & INSURANCE COMPANY



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17

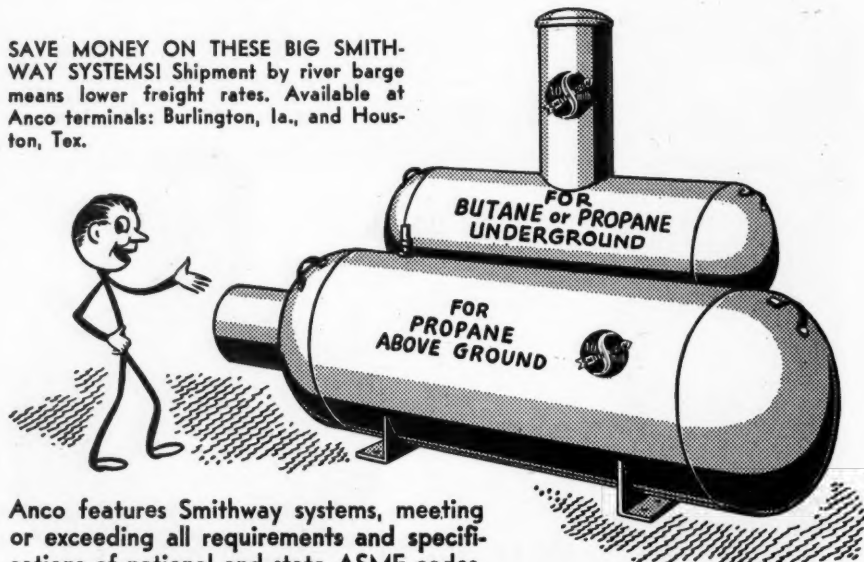
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250-500-1000 gal. L-P-G Units

for Immediate Delivery

**Larger Storage Tanks Assure Your Customer
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SAVE MONEY ON THESE BIG SMITHWAY SYSTEMS! Shipment by river barge means lower freight rates. Available at Anco terminals: Burlington, Ia., and Houston, Tex.



Anco features Smithway systems, meeting or exceeding all requirements and specifications of national and state ASME codes. Para. U-69, complete with all fittings, A. O. Smith Corporation Quality Construction.

ABOVE GROUND Propane systems, used in areas where Butane or Butane-Propane Mix is not necessary.

*Equipment and
Engineering Service
for L.P.G. Industry*

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Phone, Write or Wire for prices and literature.

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Anco Manufacturing & Supply Co.

Atlas Life Bldg.

Tulsa, Oklahoma

ANCO

50 and 100 gal. net Propane Cylinders



YOUR CUSTOMERS WILL TAKE TO THESE POPULAR HIGH-QUALITY CYLINDERS

One ANCO 100 gallon cylinder will replace approximately five 100 pound cylinders. This type of service cuts delivery and filling costs and brings in greater revenue for bottle gas dealers. Pleasing in Appearance, easy to handle and store. Built under API-ASME, and ASME paragraph U-69, with all fittings approved by National Board of Fire Underwriters. Single circumferential weld is welded automatically on a "joggle joint" for perfect alignment and maximum strength.

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*For literature and prices,
Write, Wire or
Phone*

ANCO 100 Gal. net cylinder, two-piece construction, valves enclosed in tamper-proof dome. Constructed under rigid inspection with a constant check on materials used.

Valves include: $1\frac{1}{4}$ in. filler $\frac{3}{4}$ in. vapor return, $\frac{1}{4}$ in. outage, safety relief, hose-line, and Rochester Criterion Gauge. Wt. 300 lbs., Diameter 32 in.; Length 4 ft.

*Equipment and Engineering Service for
L.P.G. Industry*

ANCO BRANCHES

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Anco Manufacturing & Supply Co.
Atlas Life Bldg. Tulsa, Oklahoma

Not An "Adaptation"—A REAL LP-GAS FURNACE Engineered For LP-GAS Throughout, By AMERICA'S LARGEST MAKER of HOME-HEAT UNITS

Exclusive LP-Gas Burner—especially engineered for LP-Gas. Not an "adaptation"; approved by AGA.

Exclusive patented Streamlined Bottom that speeds warm-air flow; sold thousands on Coleman!

Automatic Safety Pilot—with 100% positive shut-off—a safety feature that sells.

Has all famous Coleman "Warm-Floor" features millions are reading about—gives you more "pre-sold" customers.

Works with Butane, Propane or Mixed LP-Gases—widens your opportunities for selling.

Made by Coleman!—America's largest maker of home-heating units—trusted by millions.

HERE'S THE ONLY NATION-ALLY-KNOWN FLOOR FURNACE WITH SPECIAL LP-GAS ADVANTAGES--SO--

LET'S MAIL THIS COUPON FOR DETAILS OF THE COLEMAN FRANCHISE!



COLEMAN CHALLENGES COMPARISON!

Send now for these facts — about this advanced Coleman LP-Gas Floor Furnace that you can *sell easier*, with faster turn-over. Compare the Coleman features that have won thousands, against any other floor furnace. Compare Coleman's special engineering, that makes this a TRUE LP-Gas unit! Compare the way Coleman backs you with merchandise and advertising. And get the terms of the Coleman franchise which have already won so many top dealers. Coleman welcomes every comparison, for comparison will win you, too. Mail the coupon now!

The Coleman Company, Inc.,
Wichita 1, Kans.; Philadelphia 8 (Terminal Commerce Bldg.); Los Angeles 54.

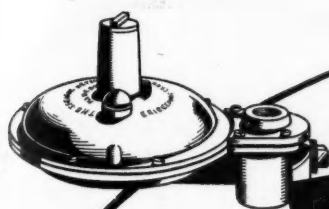
**LP-gas
Floor Furnace**

Coleman

The Coleman Co., Inc., Dept. BP-657,
Wichita, Kansas.

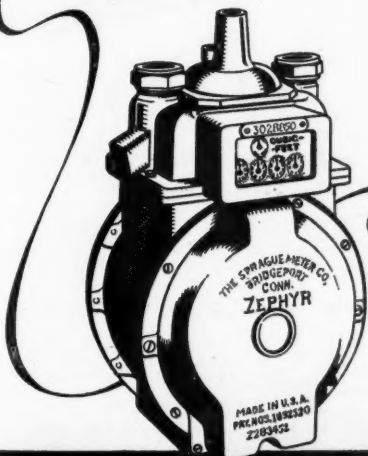
Yes, please have your Coleman distributor near me give me full facts about the dealer franchise for Coleman LP-Gas Floor Furnace in my locality.

Name.....
Store Name.....
Address.....
City.....State.....



METERS AND REGULATORS

for LIQUEFIED PETROLEUM GASES



The rapid progress of the Liquefied Petroleum Gas Industry has brought about the standardization of METERED service. Meeting the requests of leading men in this established field, Sprague Research Engineers have developed a complete line of gas measurement and regulation equipment for this purpose. The unique design of Sprague products makes service perpetual with minimum care under the most trying conditions, and are made of cast iron or aluminum castings impervious to fire and the elements, offering simplicity in construction and economy of maintenance.

THE

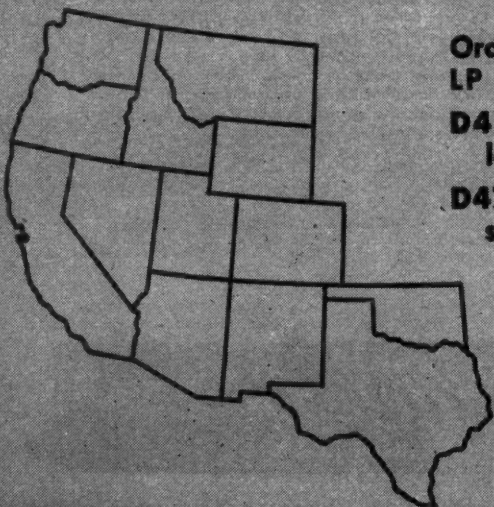
Sprague Meter

COMPANY

BRIDGEPORT, CONN.

Dealers Attention!

**Western-Holly Gas Ranges are
available to you NOW in
Texas and Oklahoma as well as
the eleven Western States**



**Order these fine Western-Holly
LP gas ranges by number:**

**D470 GLM—with griddle,
lamp, and minute minder.**

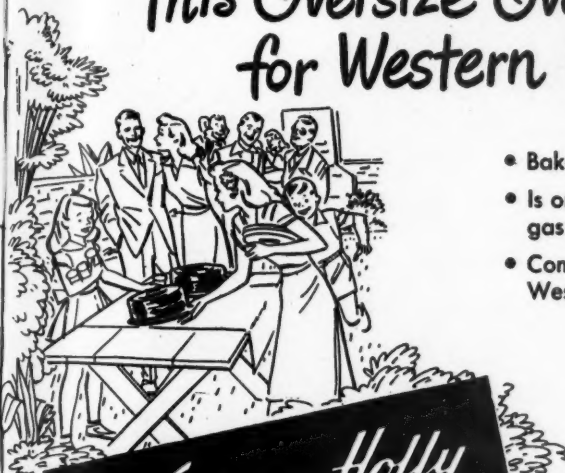
**D470—without above acces-
sories.**

**Dealers in these states
may secure immediate
delivery by writing to**

**WESTERN STOVE
COMPANY, Inc.**

CULVER CITY, CALIFORNIA

This Oversize Oven is REALLY for Western Living

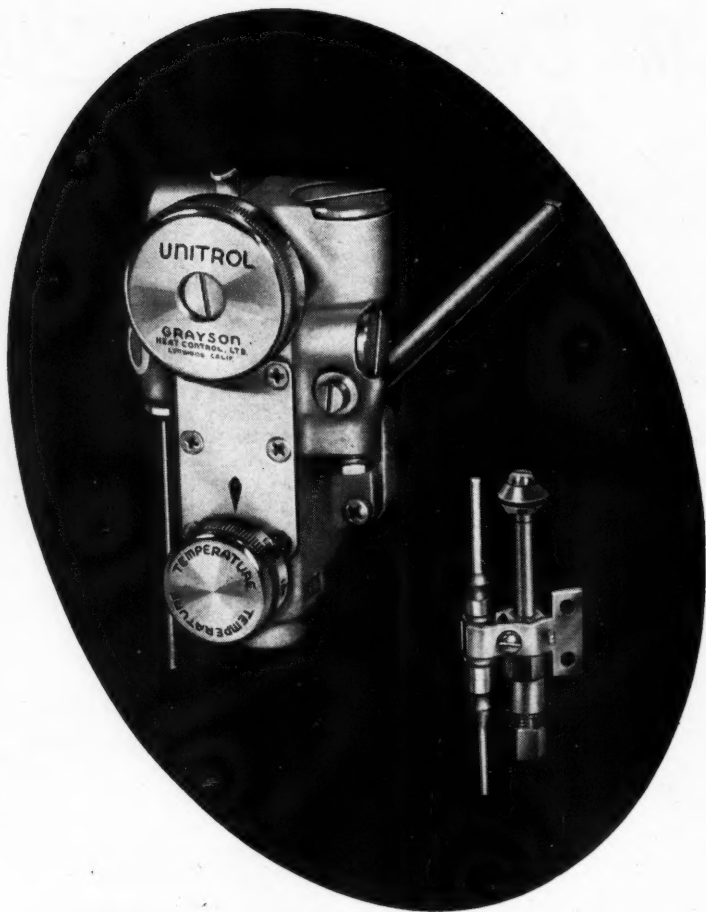


- Bakes two cakes at once
- Is one of the biggest features on any gas range today
- Compare the size of any other oven with Western-Holly!

- Holds largest roasting pans made for home use
- Has 100% side circulation
- Removable side racks make this big Western-Holly oven still bigger!



Branch Offices: San Francisco, Dallas



only the finest water heaters
have the *Unitrol "A"*

GRAYSON CONTROLS

DIVISION ROBERTSHAW THERMOSTAT CO.
LYNWOOD, CALIFORNIA



Dependable!

High Safety

McNamar

LP-GAS

STORAGE VESSELS



"A Name that Stands for Quality"

McNamar STORAGE SYSTEMS for Butane and Propane Gas are rolling from the Plant at PEAK PRODUCTION. These large systems . . . 6,000 gallons to 30,000 gallons . . . are constructed of high tensile steel, ASME U-69 Code of Construction. Each Vessel is inspected by the National Board of Boiler and Pressure Vessel Inspectors. McNamar Systems give you exclusive features that pay extra dividends on your storage tank investment.

18,000 Gallon - 30,000 Gallon Systems—3 WEEKS DELIVERY

6,000 - 7,000 - 12,000 Gallons—10 DAYS DELIVERY

ALL UNION MELT WELDING USED AT McNAMAR!

*WRITE FOR further details and more proof that
there is more worth in McNamar Systems.*

McNamar Boiler and Tank Co., Inc.

BOX 868

TULSA, OKLA.

JULY — 1947

25

FISHER
TRADE MARK OF
PRECISION
GAS REGULATORS

TYPE 922 REGULATOR BUTANE-PROPANE SERVICE

APPLICATION

Type 922 regulator is designed to handle a capacity of gas adequate for all domestic and normal commercial loads up to 100 cubic feet per hour. The capacity and regulation is superior to that of any similar size regulator on the market.

Normally supplied with inlet fitting having orifice for propane. Larger orifice supplied for butane when specified.

Available for either single drum service with various inlet and outlet connections or for two drum service with different pigtail and manifold assemblies.

Listed as Standard by the Underwriters' Laboratories.

Each Regulator Individually Tested for Flow, Regulation, Lock-Up and Leakage.

SPECIFICATIONS

CAPACITY — 100 cu. ft. per hr. or more.

REDUCED PRESSURE — STANDARD SETTING 11" Water Column.

INLET CONNECTION — Standard, female POL.

CONNECTIONS OF SPECIAL ORDER — $\frac{1}{2}$ " and $\frac{3}{4}$ " Pipe Thread.

OUTLET CONNECTION — $\frac{1}{2}$ " female pipe thread standard.

RELIEF VALVE — Built-in, set for 1 lb. and sealed.

BODY AND COVER CASTINGS — 3% Gum.

FINISH — Inside tumbled and hard lacquer finish.

MOUNTING — Two bottom feet with fast screws and washers.

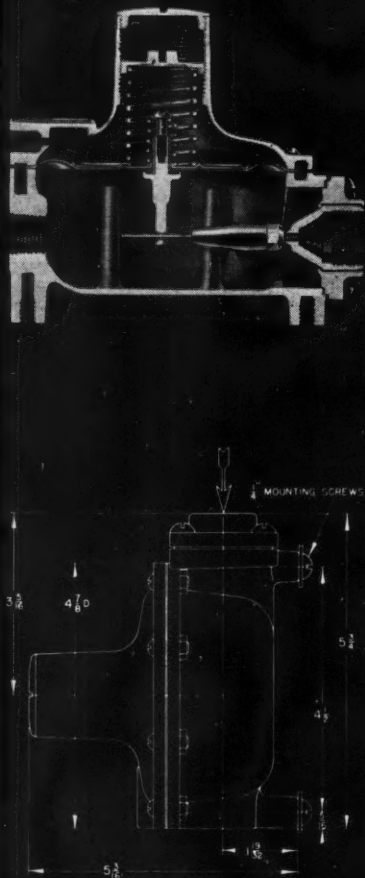
SHIPPING WEIGHT — Approximately 4 lbs.

FISHER GOVERNOR COMPANY

MARSHALLTOWN, IOWA

Western Office: 2324 E. 8th St., Los Angeles 21, Calif.

Eastern Office: 312 E. State St., Westport, Conn.

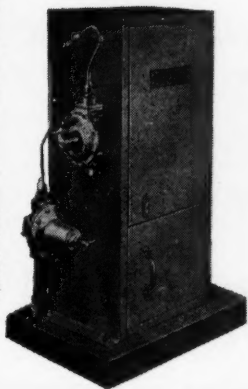


**WORLD'S LARGEST EXCLUSIVE MANUFACTURER OF PRESSURE
CONTROL EQUIPMENT**

five features

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ALL-SEASON GAS SERVICE



The Mitchell Industrial Vaporizer — available in four sizes offering a range in capacities from 30 to 120 gallons per hour.

LIVE TANKS. During normal operation of Mitchell vaporizers, only liquid fuel is drawn from the storage tank. Hence, tanks don't frost up and go dead due to heavy withdrawals.

YOU'RE IN CONTROL over gas supply. So long as a suitable LP gas mixture is used — to provide at least 5 pounds tank pressure at lowest prevailing temperature — the Mitchell Vaporizer will always supply a dependable flow of uniform gas.

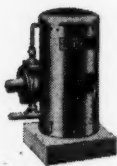
AIDS ANY SYSTEM above or below ground, provided tank has a liquid and a vapor takeoff. Dependable Mitchells make possible the use of above-ground tanks, even in cold climates.

STEADY HEAT. Same number of B.T.U.'s in every cubic foot of gas Mitchell-vaporized from a given mixture. Gas is dry... always delivers bright, blue flame when burners are once adjusted.

OPERATION IS SAFE. No liquid can enter vapor line; pressure never becomes excessive in vaporizer, thanks to Automatic Selective Control.

the MITCHELL VAPORIZER

THE DOMESTIC VAPORIZER FOR SMALL SERVICE DEMANDS **AUTOMATIC SELECTIVE CONTROL REGULATES SUPPLY OF GAS TO MEET DEMAND**



The Mitchell Domestic Model is designed for the light service demands of the average home or small store, averaging under 2 gallons per hour. It performs equally well with above ground

or below ground tanks, and the liquid fuel is drawn from the storage tank into the vaporizer exactly in proportion to the service demands.

The Mitchell Vaporizer is connected to the storage tank with both liquid and vapor lines. A float-actuated valve known as the surplus flow valve operates in the vapor line. This valve is normally closed. It opens only if and when the demand for gas temporarily exceeds the capacity of the vaporizer. The action of this valve permits the vaporizer to supply either generated gas, or storage gas, or both at the same time. Its action, which is automatic and precisely responsive to the demands for gas, involves the patented principle known as **AUTOMATIC SELECTIVE CONTROL**.

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JOHN E. MITCHELL COMPANY

Manufacturers of Fine Machinery for *Forty Years*
DALLAS, TEXAS

*Before Buying Your
NEW RANGE*

**HARPER CENTER
SIMMER BURNER**

Harper Center Simmer Burners are...
 1. They are the only 2 burner burners...
 2. They are the only burners...
 3. They are the only burners...
 4. They are the only burners...

2 BURNERS IN 1

HARPER-WYMAN COMPANY, CHICAGO 20

Range buyers read about
the new, improved

HARPER CENTER SIMMER BURNER

in these powerful
selling magazines

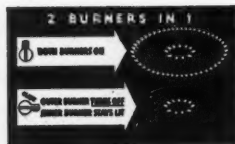


"Word-of-mouth" advertising in the past sold more than a million and a half gas ranges equipped with the Harper Center Simmer Burner. And now, for the first time, we are telling your customers about this famous top burner, using the leading national magazines shown here. It means that some 21,500,000 women readers will know how to identify Harper equipped ranges.

It's easy to trade-up your customers to a higher priced range by *demonstrating* the many advantages of the Harper Center Simmer Burner...the "2 burn-

ers in 1" top burner that gives just the right heat for every cooking requirement. The measured heat of the Cooking Burner eliminates "pot-watching"... keeps kitchens cooler...requires so little water that vital minerals and vitamins are always retained, making foods tastier, more nutritious.

To help you sell more, and better ranges, we have prepared a FREE booklet, "How to Sell More Gas Ranges," which contains a series of quick, convincing floor demonstrations planned to dramatize the advantages of the modern gas range. Send for copies for your salesmen. Harper-Wyman Company, 8563 Vincennes Avenue, Chicago 20, Ill.



The Harper Center Simmer Burner operates on the unique principle of "2 burners in 1"...a **STARTING BURNER** for frying and to start foods boiling, plus a small, economical **COOKING BURNER**, to maintain the cooking...both controlled by the same handle. It is subject to finer gradations of low heats—greater control and economy—than any other top burner made.



"... Holds the Lines,
for Gas"

HARPER CENTER SIMMER BURNER



DEPENDABLE SERVICE

Reliance Regulators assure absolute control of steady outlet pressure to L-P gas users. They are safeguarded by a safety seal and installed with automatic control of multiple cylinder assemblies. Two-step reduction eliminates possibility of high pressures getting into appliances.

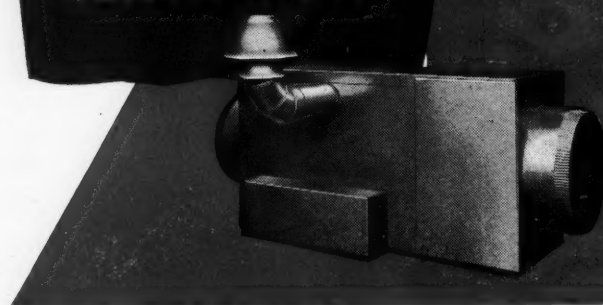
Type MC Regulator with 2" Type H Secondary Regulator. Capacity up to 6600 cu. ft. of Vapor per hour.

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New markets and new profits are yours now with this amazing new Norman Southerner LP gas central heating system for temperate climates. It's compact . . . fully automatic forced air . . . easily installed out of the way in the attic or suspended from joists under the floor . . . saves on costly duct work and chimney work . . . converts old homes to central heating at low cost . . . offers an efficient central heating system for new homes.

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MODEL FU 30
BTU Output 22,500
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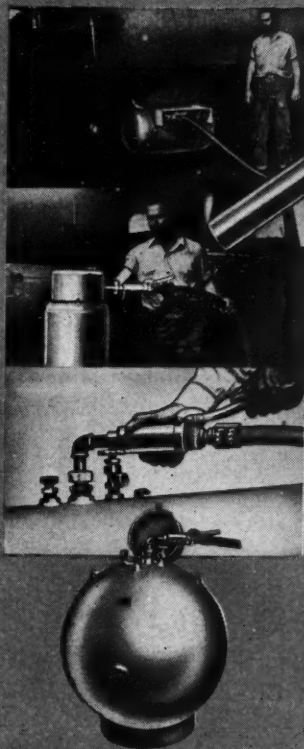
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BUTANE-PROPANE News

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USE PW-200 QUICK FILLING SAFETY
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For safety sake alone if for no other, this PW-200 Quick Filling Hose Nozzle fits squarely into every L. P. G. Dealer's operation . . . on his station dispenser and delivery trucks.

FILL MORE TANKS AND BOTTLES PER DAY. This fast operating, rugged, easy to handle dispensing nozzle may easily be attached to any L. P. G. filling hose.

Built exclusively by Selwyn-Landers on Parkhill-Wade patents, scores of PW-200 hose nozzles have been in constant use for over 10 years with outstanding performance and complete satisfaction.

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Whether it's this sort of SERVICE, or Bulk Storage or Domestic Storage Systems perfectly built and "ready to use," you cannot go wrong.

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Write for our "BLUEPRINT FOR Surer PROFITS" catalog NOW, and learn more about our "ONE-STOP" LP-GAS EQUIPMENT SERVICE.

SOUTHERN GAS

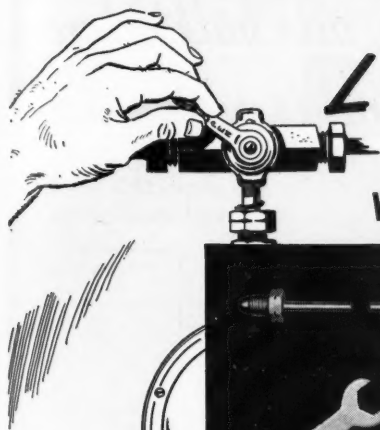
& EQUIPMENT CO.

Ateo Bldg.
Tulsa, Okla.



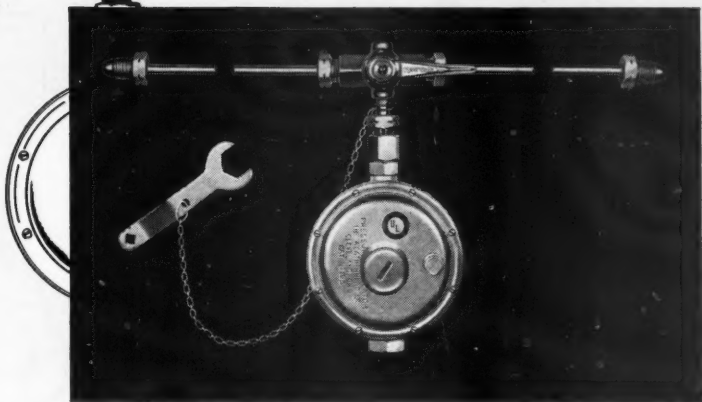
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LP Gas Service

with a twist of the wrist



● Here is a Weatherhead LP-Gas Assembly Unit for supplying gas service to appliances. The manual throw-over gives instant access to the reserve supply with a simple twist of the wrist. Turning the handle opens the line from the cylinder or bank of cylinders toward which the handle points, at the same time closing the other side of the system.

This Assembly Unit (catalog No. 854) consists of:

Manifold, Regulator, Two Pigtailed, POL Wrench and Chain — all standard parts from the complete line of Weatherhead LP-Gas equipment...conveniently packaged in an individual carton. Write today for your copy of the Weatherhead LP-Gas catalog.

Look Ahead with

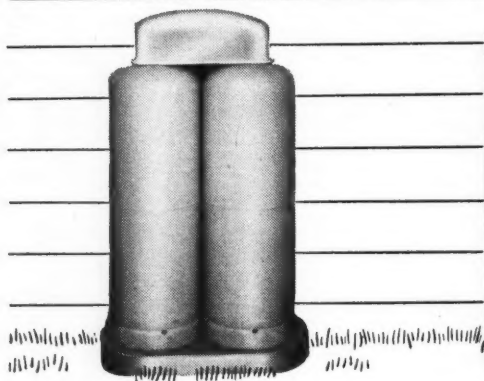
Weatherhead



THE WEATHERHEAD COMPANY • CLEVELAND 8, OHIO

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"With that new cover, our bottled gas service looks better and is safer, too"



*says this
pleased housewife*

Yes, Madam, both appearance and safety are important to you. (And to your dealer also.) The day is practically gone when regulators and valves stood exposed to the weather and nobody objected. Now, even more important than appearance is the safety factor. Housings by Stampings, Inc., provide both appearance **and safety**. Alert operators are equipping their new installations with the popular D-I all-aluminum housing. Available in both post and wall-mounted models. It's good-looking. It's safer. Write us for catalog and price list. Stampings, Inc., Davenport, Iowa.



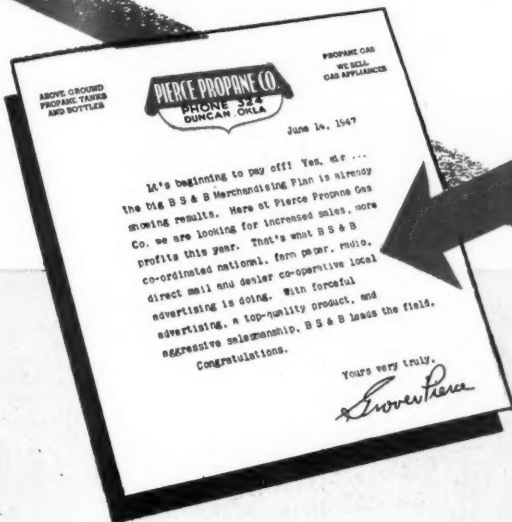
QUICK DELIVERY

"Increased Sales, More Profits this Year"

... thanks to the BIG

BS & B

MERCHANDISING PLAN

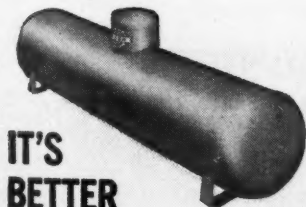


● MR. GROVER C. PIERCE. Alert young president who has developed the Pierce Propane Gas Co., Duncan, Oklahoma, into one of the outstanding L-P gas dealerships in the Southwest.

EVERY DAY dealers are feeling the increasing force of the big Black, Sivalls & Bryson Merchandising Plan. Closely integrated national, farm paper, radio, direct mail and dealer co-operative local advertising are turning inquiries into prospects . . . and prospects into CUSTOMERS! New sales records are being set . . . greater profits realized. IT IS a big year for B S & B Domestic Propane Systems . . . and for B S & B dealers, too!

However, advertising isn't doing the job alone. The outstanding, superior features of B S & B Domestic Propane Systems are real sales clinchers. ● ASME, NBFU code construction ● Hydrostatically tested, dehydrated and sealed against moisture ● Inspected by independent underwriters ● Welded automatically ● Periodic production-line X-rays ● Top-quality, long-lasting materials throughout.

You, too, can profit from the big B S & B Plan . . . if you act quickly. A few choice dealer territories remain open. Write or wire at once for complete details. Address Propane Gas Equipment Division, Black, Sivalls & Bryson, Power and Light Building, Kansas City 6, Missouri.



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BETTER
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FOREIGN INQUIRIES INVITED

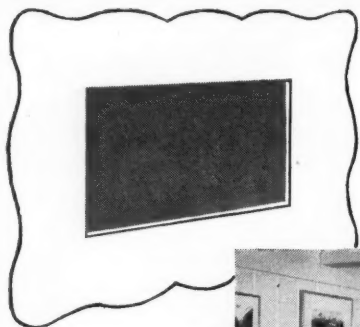
BLACK, SIVALLS & BRYSON, INC.

KANSAS CITY, MO.
CASPER, WYO.



Cable Address: BLACK, KANSAS CITY, U.S.A.

OKLAHOMA CITY, OKLA.
CALGARY, ALTA.



PANELRAY

a space heating masterpiece

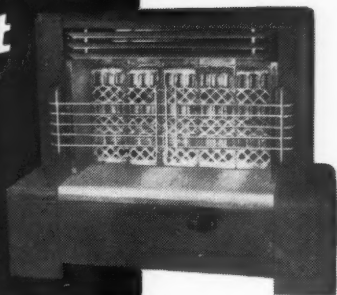
Radiating clean healthful infra-red rays throughout the room area, Panelray provides the superior head-to-toe comfort of radiant heating. It is completely vented to prevent the formation of moisture on windows or walls.

DAY & NIGHT

Day & Night Butane appliances are exported by Anchor Oil Co., Houston, Texas

DAY & NIGHT MANUFACTURING COMPANY
Monrovia, California • One of the Dresser Industries

*No Other Heater
Circulates Heat
Like a
CIRKLAIR*



**Cirklair
LOWBOYS**

- 16,000 to 24,000 B. T. U. Sizes
- Modernly styled. Beautifully finished.
- May be financed under FHA Title I and VI.
- A. G. A. approved for LPG.

Because:
**No Other Heater
Can Use The Exclusive and
Patented Cirklair Features**

Back of the radiants of a Cirklair Heater are multiple ducts of a patented design. Air flowing through these ducts picks up heat, rises and flows to all parts of a room. *This is a functional operation, not mechanical.* This constant flowing of air to and from every part of a room prevents excessive heat wastefully stacking up at the ceiling—pulls cold air off the floor replacing it with heated air, completely eliminating uncomfortable cold floors. Open cherry radiants provide quick heat.

**Ask Us For the Facts About Cirklair,
and Your Sales and Profit Opportunity.**

You can sell more of Cirklair Heaters, both portable and inset models, because you have more proven features to sell. You have no competition because no other gas heater renders equally satisfactory and economical heating performance. Write today for the Cirklair Plan.

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THE FOLSOM COMPANY

3106 Oak Lane

"Since 1909"

Dallas 1, Texas

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1

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Packed into every shipment of

Sinclair L•P Gases

*is the integrity of Sinclair ...
a great name in oil*

Sinclair plans its Propane production
to meet its peak contract demand.

Keep us in mind for the day when
increased supplies will permit us to
serve new customers.

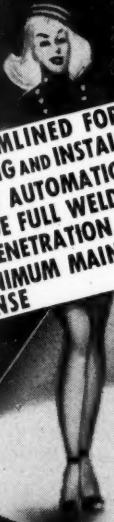
SINCLAIR

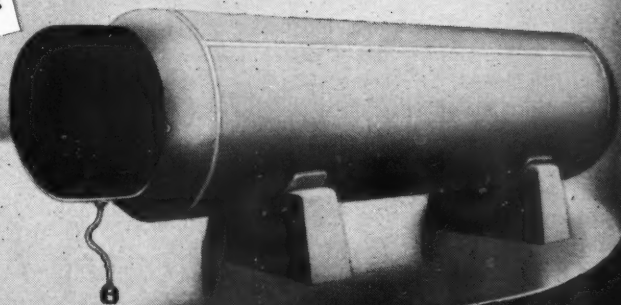
**SINCLAIR PRAIRIE OIL COMPANY
SINCLAIR BUILDING, TULSA, OKLAHOMA
LIQUEFIED PETROLEUM GAS DIVISION**

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**AMERICAN
RED HEAD**

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**STORAGE • GAS-
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- STREAMLINED FOR EASY HANDLING AND INSTALLATION
 - FULLY AUTOMATIC WELDS PROVIDE FULL WELD FUSION AND PENETRATION
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AMERICAN PIPE & STEEL CORPORATION

Alhambra, California, U.S.A.

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THE NEWEST APPLIANCES AND EQUIPMENT

DESIGNED FOR BUTANE-PROPANE OPERATION

ON EXHIBITION SEPT. 15 - 17

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ST. LOUIS, MISSOURI

DEALERS AND DISTRIBUTORS

Have you problems to solve? Do you want to learn about future supply? Would you like to balance your load? Want to know what's new in equipment and appliances?

MANUFACTURERS

Do you want to talk face-to-face with LP-Gas dealers from Coast-to-Coast? Do you want to show them your new appliances and equipment? Do you want to find new outlets and make new friends?

THE NATIONAL BUTANE-PROPANE ASSOCIATION will hold its Second Annual Convention and Trade Show in the Jefferson Hotel, St. Louis, September 15-17. It will be even bigger and better than the Chicago meeting last year. No man interested in the industry can afford to miss this event.

*Make your reservations early
for display space — for hotel accommodations*

National Butane-Propane Association

842 BUILDERS EXCHANGE

MINNEAPOLIS 2, MINN.

LETTERS

Gentlemen:

What is the advantage, if any, of using a gas line larger than the pigtail leading from the regulator?

Is it advisable to use a $\frac{3}{4}$ " pigtail, $\frac{3}{4}$ " iron pipe main line and $\frac{3}{8}$ " lead-offs to multiple installation of turkey brooders?

B.F.H.

Missouri

The pigtail between the tank and the regulator operates at tank pressure and therefore has a greater capacity in cubic feet per hour than a line of the same size on the low pressure side.

"The Bottled Gas Manual," Page 70, gives the capacities of different size pipes for a pressure drop of .5 inch.

Low pressure piping should be of ample size to take care of the peak demand with not more than .5 inch pressure drop.—Ed.

Gentlemen:

We are figuring on a multiple tank installation which will supply fuel for a potato chip and pop corn manufacturing plant.

At present the plant is operating on manufactured gas, which for some reason does not furnish enough gas to operate more than one fryer or two corn poppers at one time. I checked the appliances to determine Btu input, but none of them have that information on them.

We are going to install a new heavy duty Frialator, 485 lb. lard capacity, convert the two corn poppers of 2½ lb. corn capacity, and one carmel corn 20-gallon mixture capacity to burn propane. I would like to know how large the main line should be, the regulator capacity, and

how many cylinders to connect on each side?

At present his manufactured gas consumption monthly has been 55,000 cu. ft. which cost him about \$81. His summer load runs about \$100 per month.

I will appreciate any information which you can let us have to make the right installation to meet his demand. We have not had any experience with this type of load demand so I am calling on you for help. I would also like to know what 100 lb. propane gas should be charged to compete with his present gas bill?

S.J.L.

Wisconsin

We recommend installation of a 1-in. service line, with take-offs to the various appliances being $\frac{3}{4}$ in.

A 4-tank installation with an automatic control manifold will take care of the load in the summer. However, if the peak loads are very high, you should arrange your manifolds so that an extra one or two cylinders can be added to each side for winter operation at very low temperatures. A price between 5c and 6c per pound will approximate his present gas rate.—Ed.

Gentlemen:

We are going out after the farmer business on 500 to 1000-gal. propane tanks for heating their homes as well as cooking, hot water, etc. We would like to get some pointers on the procedure of new venture by use, as well as proper installation in detail.

Some competitors have sold mostly butane 500-gal. tanks—underground installed. It seems recently, demand has been for propane. Competitors have sold a few—also putting them

in the ground and covered with dirt.

Farmers here would prefer above-ground propane tanks. Will our cold winter climate permit successful installation of propane aboveground? Temperature drops to 30° to 40° below for short spells some winters. If you can guide us in this new field—in a detailed way—we sure will appreciate it.

C.R.M.

Montana

Propane will work satisfactorily in above-ground tanks under all normal conditions.

If you have temperatures of 30° to 40° below you will approach the boiling temperature of propane, -43.8°, and may get into trouble if you do not have some means of vaporization.

There are vaporizers on the market that you can use in the extreme cold weather. The balance of the year the propane will vaporize from the heat of the atmosphere.—Ed.

Gentlemen:

I have been requested by a prospective customer of mine to effect a conversion from acetylene to LP-Gas in a lighting system already installed and having been out of service for about three years. I have made a rather superficial inspection of the system in question and to all appearances it seems to be in good condition, except for a few gas cocks which seem rather loose. I have not pressure-tested the system as yet, but would anticipate doing at least that. The house is piped with $\frac{3}{4}$ " pipe except for the service line, which is $\frac{1}{2}$ ".

I would appreciate your comments on the wisdom of such a conversion and the particular precautions to be taken. My better judgment tells me that the only absolutely safe way to be certain of a good LP-Gas installation would be to tear out all of the piping and remake the joints and replace all or any part of the piping which showed signs of corrosion, but the labor involved in this thorough a

check would, I feel sure, discourage the sale. If you can advise me a safe and at the same time practical course to pursue on this conversion I will be very grateful.

In Chapter 22 of "The Bottled Gas Manual" there appear some illustrations of gas lighting fixtures manufactured by the General Gas Light Co., but I have been unable to secure their address. I would appreciate your sending me, if available, the address of this company.

D.W.S.

Tennessee

While it is entirely possible to use piping that has previously been used for acetylene, we have never looked upon the practice with favor without first taking all joints apart and making them up again with a luting compound that we are sure is not soluble in the LP-Gases.

It seems that you are taking unnecessary chances when you depend upon someone else's work, particularly when it was not installed by a person experienced in handling our particular kind of fuel. Another thing to keep in mind is that any acetylene installation is an old one, and that gas cocks used in it are apt to be worn or leaky.

The gas lights illustrated in Chapter 22 of "The Bottled Gas Manual" are manufactured by the General Gas Light Co., of Kalamazoo, Michigan.—Ed.

Gentlemen:

Please refer to page 172 of the Second Edition of your Butane-Propane Handbook, and give me some information that a layman in the field can understand. The problem of pipe sizes as compared to a given load (Btu per hour or cubic feet per hour) has always been a real problem to me, and as a result I have followed the instructions of natural gas training by using large pipe for protection.

I am well aware of the fact that distance enters into the picture, but our average length of service line is 150 ft. and we use a manometer after the appliances are installed to determine the pressure and set the regulator to deliver 6 ounces of maximum

load, but in some cases this causes trouble with refrigeration when heating is off and I am not sure that the individual regulator is the answer to the problem.

However, we find that on all 1¼" lines this does not affect as greatly as it does on 1" lines, but according to the best estimate we are able to arrive at, a 1" line is sufficient in size to carry all ordinary domestic installations, especially, if the service pipe size is carried on through to a point in the line with the main heating appliance and then be sure that all lateral lines to small appliances are not smaller than ¾".

W.F.K.

New Mexico

Most appliances can stand a variation of 3" or 4" of water column pressure without giving trouble. However, pilot lights and refrigerators are more sensitive and the closest to a constant pressure you can have, the better the service.

A 150-ft. service is comparatively long and although theoretically a 1-in. service is ample the on and off action of a large sized house heating unit may cause a demand so large that the pressure will tend to drop quite a bit at the appliances before the regulator can pick up the load.

When a large heater is installed or a large water heater, we recommend the use of an appliance regulator set ahead of the refrigerator to help stabilize the pressure as they are sensitive when on low flame.

It may be that some of your trouble may be due to the fact that in some of your installations the refrigerator may be tied into the house piping down stream or very close to a large input water heater or space heater burner that will tend to make a surge in the house piping pressure.

You are very right in using a little larger than necessary house piping as the initial cost is usually very little more and it allows for future load building.—Ed.

Gentlemen:

I just read over again an article in "Butane-Propane News" under the caption "Industrial Propane Gains Ground."

The cost of propane is shown as

considerably less than the cost of acetylene for the same amount of work.

Now as propane requires twice as much oxygen as acetylene per cubic foot, is it not true that the decreased propane would be more than offset by the increased cost of the oxygen used?

J.H.K.

Michigan

Propane is definitely more economical than acetylene for cutting and general heating work. In a cutting operation, the use of the fuel, either propane or acetylene, is to heat the metal to a temperature high enough to supply oxidation of the metal when contacted with an oxygen blast.

For an equal amount of heat applied to the metal, very little additional oxygen is required when using propane.

One cubic foot propane requires approximately five cubic feet of oxygen and will produce about 2500 Btu's. One cubic foot of acetylene requires approximately 2.5 cubic feet of oxygen and produces only 1435 Btu's.

When you take into consideration the higher heat value of a cubic foot of propane and also the fact that the greatest use of the oxygen is for oxidizing the metal and the fuel is merely used for preheating, we cannot agree with your conclusion.—Ed.

Gentlemen:

I wish to submit to your magazine the question of: To what extent is propane gas harmful (1) to an employee in the bottling plant filling cylinders, blowing down tank cars and blowing off cylinders; (2) in a resident hook-up at stove or at cylinders.

S.Z.

Illinois

Propane gas is not harmful to the employee filling cylinders or unloading tank cars as the amount of gas blown down is small. There are no harmful effects encountered in house or stove adjusting.

Propane, unlike certain other gases, is not poisonous. Inhalation of the pure gas will cause a toxic effect similar to the use of alcohol and if enough is taken into the system the person will pass out. The after effects of such an exposure could be serious and similar to that encountered from exposure to an excess of gasoline fumes.—Ed.

Gentlemen:

We are starting in the propane business and would like to have some suggestions on fire extinguishers for the office and storage tanks.

We have enjoyed your letters very much and have found them useful in our new business.

M.H.

Kansas

We would recommend the use of CO₂ or powder type extinguishers for the tank area and trucks.

A small carbon tetrachloride extinguisher is always a good thing to have in any office.—Ed.

Gentlemen:

Can you tell us if instruments are made which can be used for testing tanks which have been used for storing gasoline, to determine if they are safe for welding?

We often have tanks which need repair and which can be steamed here, but we hesitate to begin welding if we cannot be certain that the steaming has been carried far enough to make them absolutely safe.

B.F.H.

Missouri

There are instruments on the market that will indicate the pressure of explosive or flammable mixtures of air and gas. They can be obtained from: E. D. Bullard Co., 1213 South Olive St., Los Angeles, Calif., or Mine Safety Appliances Co., 325 Wall St., Los Angeles.

We wish to caution you on welding gasoline tanks for even after steaming and after they are found vapor-free, it is possible for scale to be knocked off their interior walls which may again make the tank hazardous.

A check for vapors should be made if a tank has stood overnight even though welding had been done in it the day before.—Ed.

Gentlemen:

I am desirous of gathering information relative to the pumping of LPG products in general and the loading

and unloading of tank cars in particular. In this connection I have read with interest several articles in your magazine by R. Stanley Smith.

Please advise if it is possible to procure copies of all articles written by Mr. Smith for your magazine. I would also appreciate your advice as to where any other pertinent information on this matter can be obtained.

J.T.S.

Texas

I am asking Mr. Smith, Smith Precision Products Co., South Pasadena, Calif., to mail you a complete set of reprints of his articles which have appeared in BUTANE-PROPANE News upon the subject of transfer of liquefied petroleum gases.

You, no doubt, will receive these in the immediate future.

You also can get comprehensive information upon this subject from our "Handbook Butane-Propane Gases."—Ed.

Gentlemen:

Will you kindly forward to us the names of several firms who can give us information regarding raising the compression of Chevrolet Motors.

We have several 1947 Chevrolet trucks to convert to propane operation; however, we are not familiar with the proper method of determining the correct amount to plane from the motor heads.

P.W.O.

Indiana

You will find in BUTANE-PROPANE News the advertisements of several firms manufacturing motor changeover equipment.

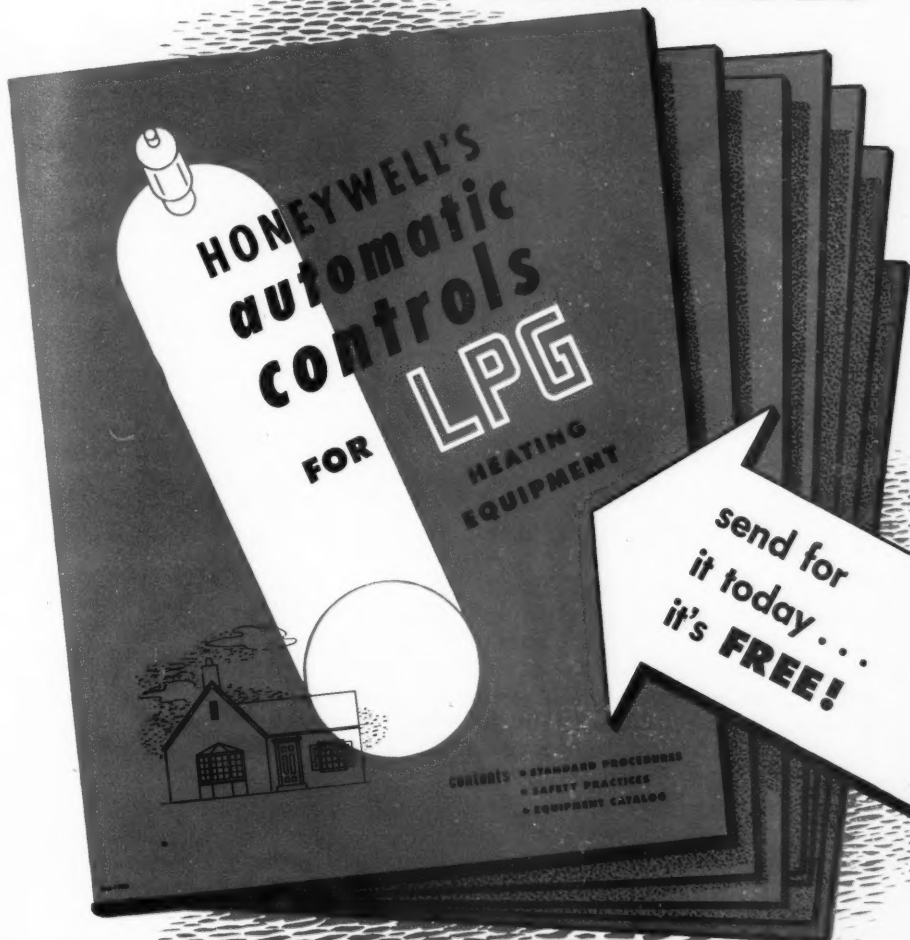
Normally, 1/16 inch can be shaved off the Chevrolet head for increasing compression. Each head should be checked for metal thickness and valve clearance before it is shaved off.

The spark should be advanced to take advantage of the high octane value of the fuel.—Ed.

● BUTANE-PROPANE News welcomes letters from our readers, but it must be understood that this magazine does not necessarily concur in opinions expressed.—Editor.

THIS MANUAL
TELLS ALL ABOUT

L-P GAS CONTROLS



MINNEAPOLIS
Honeywell
CONTROL SYSTEMS

MINNEAPOLIS-HONEYWELL REGULATOR CO.
2642 Fourth Avenue South, Minneapolis 8, Minnesota
Please send my free copy of "Honeywell's Automatic Controls for LPG Heating Equipment"

Name

Address

City State

WARREN

LIQUEFIED PETROLEUM GAS

- PROPANE
- BUTANE



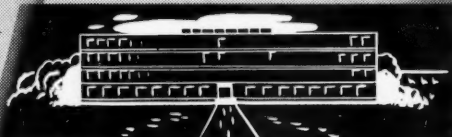
DOMESTIC



TRANSPORTATION



INDUSTRIAL



MUNICIPAL

The year 1947 marks the Silver Anniversary of Warren's successful and efficient operation in the petroleum field. Side by side Warren and the Liquefied Petroleum industry have advanced together until today, both are major factors in the life and industry of America. For a dependable year 'round source of LP-Gas supply, contact your nearest Warren office.

"1922-Silver Anniversary Year-1947"

WARREN PETROLEUM CORPORATION

TULSA, OKLAHOMA

Detroit

Mobile

Houston

COMMENT

BUSINESS is still good but it isn't as rushing as it was. Gradually the supply of equipment and appliances has been catching up on demand. In some cases it has caught up entirely.

But that is to be expected and it is being accompanied by essential readjustments that are helping dealers to get their bearings—to better see where they are and the course ahead.

As a whole, the situation is excellent. War restrictions, postwar demand, temporary shortages, frenzied customer demand, new competition have helped to bring the industry to a place where clearly marked signs point the best road ahead.

It lies in constructive and active sales programs; in safer installations; in better service policies; in higher grade products—and, maybe most of all—in vision.

There is definite evidence to indicate that our industry is settling down to sound principles of operation which include adequate financing; proper insurance protection; constructive legislation, conservative policies.

The industry is stepping out of its boom years of flighty, spasmodic, haphazard growth. It is becoming organized—collectively and individually. It is beginning to realize it has a future of tremendous possibilities, a future with a definite goal, a great public service to render and a personal responsibility.

The industry has come to manhood and it looks like it is going to accept its rightful position as a vital

business of national and international scope.

In such a plan there is no place for petty jealousy, price cutting, inferior merchandise, careless workmanship, shyster competition. Instead, there must be definiteness of purpose, mutual objectives and the strength of group action.

This seems to be taking shape rapidly. It is apparent in the attitudes of dealers all over the country, in the association conventions and in individual action.

The future is so big, LP-Gas is so essential a commodity, that a dealer is blind, indeed, if he sacrifices a great potential for a passing advantage.

All industry problems have not been worked out—and never will be, but the changed spirit with which dealers, manufacturers and producers are approaching these problems promises well for the years ahead.

Figures have been released showing shipments of LP-Gas domestic ranges for the first quarter in 1947. Standard, apartment size and combination LP-Gas ranges for the first three months totaled 129,273.

At this rate there will be more than a half million LP-Gas ranges delivered to the industry for the year 1947.

Most of these are for new installations which now or later will call for water heaters and refrigerators.

Not bad, is it?

By Ed.



Si. H. Darling
Guest Editor for July

Looking Ahead in Your Business

By S. G. DARLING

President, Kansas LP-Gas Association and Vice President,
Darlingas Service, Inc., Pratt, Kansas

WHEN we were preparing ourselves to take our place in life, our elders often advised us that the course we were contemplating was not good because it had no FUTURE.

During the years that we have been in the liquefied petroleum gas business, when we had a new plan we tried to ask ourselves the question, "DOES IT HAVE A FUTURE?" At the beginning of our bottled gas business in the early thirties, we concluded that the only way to build a sound gas business for the FUTURE was to retain the ownership of the equipment the customer needed to use bottled gas. Today we have an enviable and profitable bottled gas operation that is exclusively ours.

Now we are seeing a tremendous market for bulk gas materialize. Instead of dashing off hellbent for what there is in it right now, we should again look to the FUTURE.

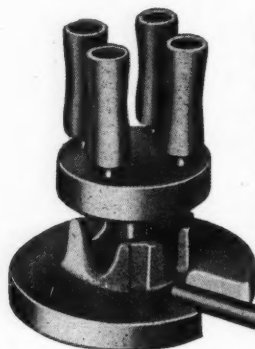
We observe from our experience with a leased metered gas system plan, because of the need of large storage, it is not practical to retain ownership of this bulk gas equipment as we had done in the case of bottled gas. A fuel purchase plan whereby the customer gives us a written agreement to purchase all his requirements from us in consideration for the difference between the regular price and the fuel agreement price of the system, offers a sound plan for building ourselves a bulk gas operation that does have a FUTURE.

Such plans are not only beneficial to the producer and the distributor of fuel, they are also good for the customer. They offer the best way we know to provide our customers with an economical and satisfactory GAS SERVICE. It is basing our operation on a relatively fixed and known gas load.

Luck and unusual circumstances often result in temporary success. Planning, time and hard work are the only elements we know that will make for a successful FUTURE.

TWO cylinders instead of ONE

The average plumber or sheet metal worker will use TWO cylinders of butane or propane in the same time that it takes a domestic customer to use ONE. This fact has been proven conclusively by dealers who have developed this type of trade. Any dealer can do it because every town has such customers to serve. A few other good "hot" leads include: general contractors, public utilities, telephone companies, city municipalities. If you don't know how to sell these people LP-Gas service, let us help you.



No. 1A Furnace

No. 1 Furnace is a shop or field unit that is built for heavy duty work. It's excellent for laying of lead joint pipe or sulphur compounds for water and sewer lines, melting tar for roofers, making up manifolds on large housing jobs. It accommodates 12" lead pot or tar kettle. Lead capacity—240 lbs.; compound or tar—5 gals.



No. 1 Furnace

No. 1A Furnace is portable and was designed for use in industrial, agricultural or commercial fields where heat is needed quickly and on the spot. It is excellent for use with water boilers, tar kettles, grease vats, paint vats, dryers of all kinds. It is very adaptable and may be built into small space easily. Approx. 2350 deg. may be developed by each tube.



Mutual

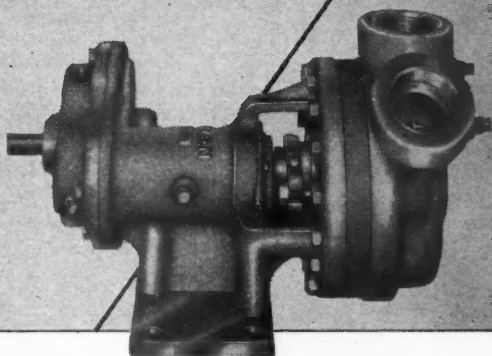
LIQUID GAS EQUIPMENT CO., Inc.

3600 WEST IMPERIAL HIGHWAY, INGLEWOOD, CALIF.

A CORKEN GOOD.. ..PUMP!

That's Exactly
What You Get
When You Install


CORKEN
MODEL-50 TRUCK PUMP



- LONG LIFE
- SUSTAINED CAPACITY
- HIGH PRESSURE
- GUARANTEED

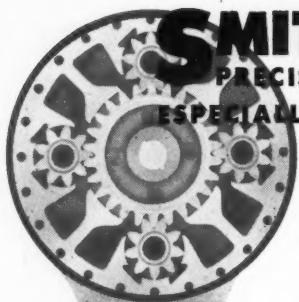
A QUALITY PRODUCT FOR
BUTANE-PROPANE DEALERS EVERYWHERE

CORKEN'S

L-P GAS EQUIPMENT DEPT.

206 EAST GRAND

OKLAHOMA CITY, OKLA.



SMITH

PRECISION Butane - Propane PUMPS ESPECIALLY ENGINEERED FOR L.P.G. SERVICE

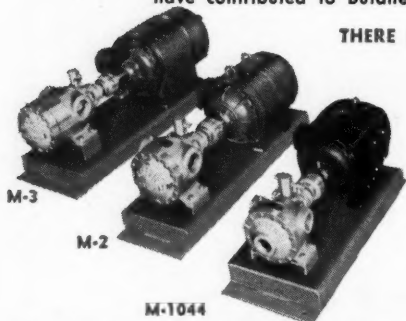
It is recognized that the pumping of Butane and Propane presents problems beyond those found in the transfer of ordinary liquids. That is why Smith Pumps do not rely on ordinary pumping principles. Their balanced gear design, their exacting construction, and their feature of automatic adjustment to wear, give them an unusually long operating life.

However, in this most difficult service, even with the best pump, it is of the greatest importance to insist on correct installation. We do all possible to assist customers in this regard. This is our best assurance of customer satisfaction.

Therefore, before you plan your installation, write us for our latest catalog and for valuable information contained in reprints of articles which we have contributed to Butane-Propane News.

THERE IS A SMITH PUMP

FOR EVERY BUTANE-PROPANE SERVICE

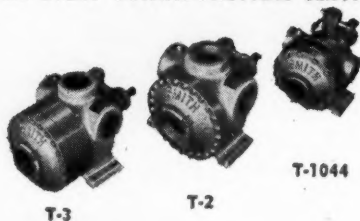


Model M-1044 Pump. Capacity 20 GPM at 1800 RPM for direct connecting to 1½ HP explosion-proof electric motor.

Model M-2 Pump. Capacity 50 GPM at 1800 RPM for direct connecting to 3 or 5 HP explosion-proof electric motor.

Model M-3 Pump. Capacity 100 GPM at 1800 RPM for direct connecting to 5 or 7½ HP explosion-proof electric motor.

Electric driven pumps may be furnished completely assembled with welded steel base, flexible coupling, and explosion-proof motors. (Specify type of current.)



Model T-1044 Truck Pump. Capacity 20 GPM at 500 RPM shaft speed, for direct connecting to truck power take-off.

Model T-2 Truck Pump. Capacity 50 GPM at 500 RPM shaft speed, for direct connecting to truck power take-off.

Model T-3 Truck Pump. Capacity 100 GPM at 500 RPM shaft speed, for direct connecting to truck power take-off.

IF YOUR NEED IS URGENT
we can usually make **IMMEDIATE**
DELIVERY on all models, including
Explosion-Proof Electric Motors

SMITH

PRECISION PRODUCTS COMPANY

1135 MISSION STREET • SOUTH PASADENA • CALIFORNIA • PHONE PYRAMID 12293

Merchandising Butane

In the Rice Fields of Arkansas

By ZOE JOHNSON

CREATING a demand through ingenuity in advertising and demonstrating the practical and economical modern conveniences of butane has made Thad S. McCollum a progressive and prosperous LP-Gas dealer in eastern Arkansas. He is the pioneer of the industry on the prairies of the "Rice Empire," where dreams come true. His slogan is, "Where the gas and electric lines end, our work begins."

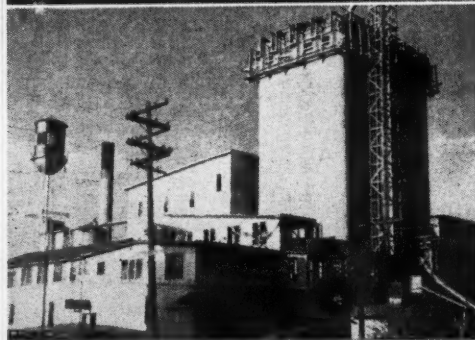
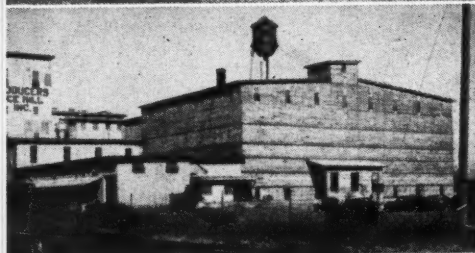
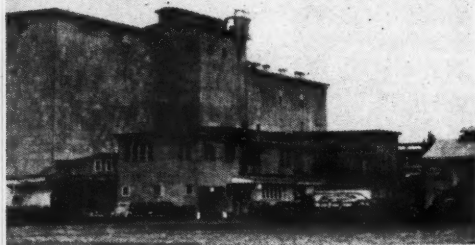
Only a few years ago the nation-famous rice country of Arkansas was swamp land waste, without a

whisper in its sodden marsh grass of the humming rice mills now rising like medieval fortresses in bustling towns and airplanes cavorting above level fields doing the prosaic work of planting and spraying crops.

Mr. McCollum's distributing business is in Stuttgart, the hub of the rice country, the duck hunting capitol of the world, and the center of the liquefied gas industry of that



Thad McCollum; Wallace Beery, MGM motion picture star, and Pete Boscarin, master of ceremonies of Duck Calling Contest at Stuttgart, Ark.



region. He started in business in 1934 and made a success in depression years by going over the country and actually demonstrating to the leading farmers of the section the practical, economical luxury of city conveniences in rural homes.

To make these demonstrations he equipped a trailer with a butane gas Tappan range, a Servel refrigerator, and a hot water heater, all functioning as smoothly from the small butane system as the heart-throb of a Cadillac. He would drive this magic trailer up to a prosperous farm house about mid-morning and give the wife of the farmer the thrill of preparing the noon meal in the completely modernized way. On a hot day from the heat of a wood burning range or an unsatisfactory kerosene stove, stepping into this cool, mechanized kitchen was like lifting the curtain to another world. In the refrigerator would be ice cream or other tempting ice concoctions, crisp salads, and frost-dewed fruits to add to the farm menu.

Demonstration Never Forgotten

These pre-prepared refrigerator foods went a long way toward clinching the sale. No farm wife would ever forget. If finances would not permit the immediate butane installation, the dream lived on and schemes were promoted to find the means. Maybe it was increasing the poultry flock, setting aside some extra pigs or calves, even a small cotton patch dedicated to the purchase of this modern kitchen.

The trailer was taken to church parties and farmers' auction sales and the women serving the dinners

were allowed to use the trailer kitchen in preparing the meals for these gatherings. Church and school carnivals were allowed to use the kitchen a week at a time free of cost. Mr. McCollum says these public demonstrations generated the greatest demand in the shortest time of any method of advertising. Thus he made it his first concern to create a demand for butane conveniences where even the dream of such things had never before been quickened.

Makes Installation Every Day

Since beginning business, Mr. McCollum has modernized over 1,500 country homes. He is now running two trucks and averages an installation every day. He is a firm believer in advertising. His most successful method of present advertising is to mail a prospective customer a copy of *Homemaker's Digest* and other illustrated literature. There's nothing that stirs a housewife's heart like pictured recipes and multi-colored views of cozy nooks and rooms in a modern home. They quicken the dormant desires for comfort and convenience that sleep perhaps because of economical circumstances.

A few days after mailing the literature a courteous salesman calls and at least further prepares the prospective customer for the final purchase of some butane installation.

To meet the financial limitations of a customer, when necessary, Mr. McCollum sells on the installment plan.

Another growing demand for butane installations is for systems

modernizing the entire farm. This includes digging a well, piping water to the house, poultry yards and stock pens and sometimes lights in the barn. These farm well installations cost the customer about \$150. He also installs small irrigating systems for gardens and truck patches. The cost to the customer for an irrigating system is about \$350, which includes digging the well and installation of a Fairbanks-Morse pump.

Naturally in this low land where water is near the surface, digging a well is not nearly as costly as in hill country where the well must be much deeper. At one time, he installed 52 water systems in 90 days.

Chicken Brooding Is Expanding

Another expanding phase of the butane business is installation of chicken brooders. The poultry industry is growing year by year and reconversion has not yet been able to meet the demand for brooders. Mr. McCollum has installed 90 brooders and could have placed more if they had been obtainable. One customer is using a brooder for warming his dog kennel. The brooders installed are made by A. R. Wood and are of 250 to 1000 capacity.

A smaller installation which is bringing in a good profit is an \$89 water and cooking system for tenant houses. These small systems are so built that when the tenant moves he can disconnect all parts and have it ready to put on the moving van in 30 minutes. The tenant farmers find the butane cheaper and more

convenient than kerosene and every one who can is buying one.

Also there are the famed White River house boats and hunting lodges—veritable floating palaces, several of which Mr. McCollum has completely equipped with butane systems.

Butane cotton choppers and flame weeders will soon be introduced into this section and Mr. McCollum will demonstrate and sell all new gas farm machinery.

On the lighter side of the story, Mr. McCollum is one of the best known sportsmen in the state. He is the originator of the National Duck Calling Contest which, since its inception 11 years ago, has grown to be one of the greatest sporting events in the United States. He had the foresight to have the contest copyrighted so that it can not be staged anywhere but in Stuttgart, Ark.

This annual sporting roundup is celebrated in November and is let each year to the highest bidder. Last November it was sponsored by Bloomingdale's Department Store, of New York, and was a rampant success. The Bloomingdale people ran the Greenhead special train from New York crowded with sportsmen and women from the East. From everywhere thousands of hunters thronged Stuttgart's streets. In 1935, the first year of the contest, there were eight contestants; in 1946 there were 216 and the winner, Lewis "Red" Wilham, drew a check of \$1000.



The final lap of the contest was broadcast by the six finalists chosen from the 216 contestants. The judges of the contest were all national celebrities: Wallace Berry, MGM motion picture star; Lynn Bogue Hunt, New York illustrator; John Hightower of *Field and Stream*; Nash Buckingham, Memphis author; Jimmy Robinson, of *Sports Afield*; and W. H. Tanner, of the Bloomingdale Store.

The most dramatic moment of the contest came during an interlude just before the judges announced the winners. The orchestra was gathering around the microphone; thousands of people were milling nervously in the roped off area of Main St., waiting for the verdict — then they came — the Ducks! Ducks by the thousands! From the northwest, in V formations, escadrille after escadrille the high flying mallards came. They moved across the sky above the milling crowd as startling as a Hollywood timing.

There was a moment of awed silence as the crowd gazed upward, then, every person who had a duck caller turned loose and the air was filled with the duck caller's ecstasy — a good-will builder for the instigator of the Duck Calling Contest and the pioneer of butane conveniences where the gas and electric lines end and his work begins.

Illinois Dealer Says it Pays to Cover Small Territory Intensively

By HARRY L. SPOONER

IN 1932, Harold Gunther and his wife, Lillian Gunther, started on a shoe-string in the bottled gas and appliance business in the village of Chillicothe, Ill. In 1946, their sales of bottled gas amounted to approximately \$15,000.

Mr. Gunther had for 15 years been meter reader and repair man for the public service company in Chillicothe which operated the electric lines. By 1932 he had saved \$800 and with this small amount decided to go into business for himself.

Bottled gas as a cooking fuel was then in its infancy but Mr. Gunther felt that this line had great possibilities as the village had no gas facilities. He secured the "Skelgas" franchise for the village and surrounding territory and made a start. The business has always been a family operation, with Mr. Gunther doing all outside work and Mrs. Gunther operating the store and keeping books. Five years later, in 1937, they added furniture to their business and today the business is about equally divided between bottled gas and furniture.

"We started from scratch," says Mr. Gunther. "We had to introduce LP-Gas to our locality as it was then totally unknown here. The first thing we did was to learn the operation of gas ranges, the method of installing the system, and all the possibilities of the new fuel. We acquired all the

information we could from Skelgas representatives and the "Good Housekeeping" reports. Then we translated all we had learned into our own words rather than trying to use big words and oratorical ability—in short, we used language that not only we but our prospective customers could understand.

"Many prospective customers were prejudiced against our fuel simply because of the word 'gas,' which they were afraid would explode. Instead



Harold Gunther standing by his truck which is loaded with 100-pound bottled gas cylinders.

of going into a long technical discussion, we told them: 'If you went to the city, you would use city gas in your cooking range and think nothing of it. With bottled gas you would have no more trouble than with city gas—all you would have to do would be to have the installation made and, once the range is connected, simply forget about it.' By our comparisons and explanation of the operations, we overcame their fear.

Cost Problem Considered

"With the question of safety decided, the next question was the cost. We explained that a 100-pound cylinder of gas would be sufficient for the average family for five months, making a cheap fuel. We have never handled the 20-pound cylinders.

"Most of our customers purchased a medium price range, complete with one cylinder of gas. We have always sold complete installations.

"As soon as we had a few installations, we referred prospects to these users, every one of whom was an excellent advertisement of our business. As a result of our work, plus the help of satisfied customers, we sold about 50 installations our first year in business.

"We did not try to take in more territory than we could profitably handle. We confined our selling efforts to the village and the immediate surrounding territory. With such a compact territory, delivery service is very quick and convenient and comparatively cheap. Today, of more than 400 installations, 90% are within the village.

"We have not run up against enough competition with electricity to complain. Since the war started, we have had a number of prospective customers who live on new rural electrification lines come in for bottled gas installations which we have had to

turn down on account of lack of stoves. We are getting but very few ranges as yet. Right now we have two that just came in. One is going outside the village to a customer on an electric line and the other, which is still without burners, is going to a village customer who is willing to wait for the burners as long as necessary in order to get the installation.

"We have many prospects waiting for installations. We do not take orders because we cannot definitely promise to deliver a range at any certain date. Many, however, have come in to get all the information needed. Some of these ask us the difference in price between cost of bottled gas and electricity. We explain that bottled gas is cheaper from three angles: First, in original cost; second, in cost of operation; third, in upkeep cost. While we can sell a good bottled gas range for \$150, an electric range of like quality would cost over \$200. We explain that an LP-Gas range rarely involves any upkeep cost for 10 to 15 years while as a usual thing an electric range will have to have replacement parts long before that time.

Let Customers Sell Themselves

"Occasionally we have a prospect who keeps talking about the electric range. To them we say that if they have their heart set on an electric range, that is what they should buy as they would likely be prejudiced against bottled gas. By using this negative psychology, most of them will eventually buy a gas range but we want them to sell themselves and we do not urge them to buy.

"We have never had any special 'drives' to sell bottled gas equipment and never had a 'sale' on anything in our store.

"Our peak year of sales was in 1937. Here in Chillicothe at that time

we had already turned the Hoover corner and were out of the depression without knowing it.

"We have never had a salesman and since 1936 have not gone out of the store to sell. Our satisfied customers can sell more than we can and because they can give exact figures of cost, their word carries as much or more weight as ours. Our gas ranges now run from \$120 to \$200, with most customers preferring one at about \$150. We are figuring that we can continue to sell all we can get without soliciting sales. Of course, we may be mistaken, but there is no indication of it now.

"Our biggest problem since the war started, and which we still have, is that we are on call 24 hours a day for service. This is because a lack of cylinders compels us to give each customer only one at a time in order to make them go around so all can have gas. No customer during all this time has had to miss more than one meal of cooking. By having a compact territory, we can go out immediately after being called on the phone and install a cylinder and be back within 15 minutes.

Make Commercial Installations

"We have several multiple installations. Since we started, we have installed 423 bottled gas ranges, 27 refrigerators and 125 water heaters. We have 23 complete installations of all three appliances. The operating equipment on all these is automatic. We have 4 restaurants using bottled gas, of which one uses four 100-pound cylinders a week. Our local newspaper is installing equipment to use bottled gas for melting its type metal.

"We have never had to do much advertising. For the first five years we used a small ad in the local paper, 'Cook with Skelgas.' Since then we have done no advertising. We have a

neon sign in our window, reading simply 'Skelgas' for identification of our store."

Before wartime restrictions, the usual terms of sale of bottled gas installations was 1/12 down and the remainder in 11 equal payments. The wartime restriction of 1/3 down and 12 months on the balance is still in force and Mr. Gunther says he wishes it would remain permanently as it is a benefit to the buyer as well as to the seller.

Asked about what he thought of the future of bottled gas, Mr. Gunther said:

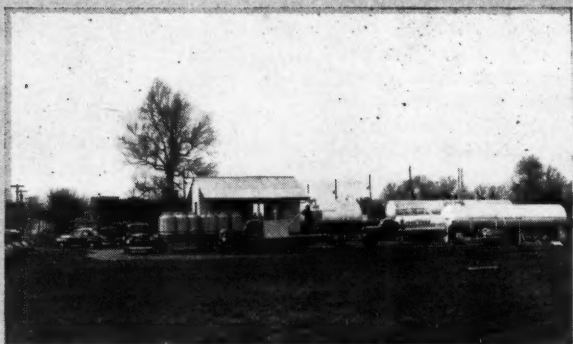
Bottled Gas Sells Easily

"Looking over the country as a whole, bottled gas is the most rapidly selling fuel there is. It will take years longer to catch up with the demand for bottled gas than for any other kind of fuel.

"We are going to install 50 LP-Gas furnaces as soon as we can get them and put in 1000-gallon tanks for heating, air conditioning, water heating and refrigeration as soon as these are available. Then we will have our own tank truck.

"We get a lot of fun out of our business and a kick out of meeting people and listening to their arguments. It gives us a greater zest for life when working for ourselves than when I had to jump at somebody else's whip. There is nothing like a business of one's own when you can meet its challenges successfully.

"We have never set the world afire since starting in the bottled gas business. Starting with \$800 in 1932, we today own our own large building which houses our store and has three rented apartments above. In addition, we have enough reserve that we can take any bump that may come in the future."



Bulk Plants For Town and Country



TOP: Cylinder filling plant and storage facilities of Metrogas, Inc., at Metropolis, Ill. Butane storage in center and right rear; propane storage in right front.

Grounds of Carolina Central Gas Co., Hendersonville, N. C. Tanks include (left to right) liquid butane storage, butane-air gas storage, liquid butane storage, propane storage. At right is cylinder filling plant.

The propane bulk delivery truck at right is part of the Hendersonville, N. C., equipment.

Serving the "Fringe Areas"

Cooperation Between LP-Gas Operators and Utilities in 17 Localities Holds the Load for Gas—A Pattern for LP-Gas Town Plants.

By RICHARD S. LEE

Manager, Eastern Division, Metrogas, Inc.,* Hendersonville, North Carolina

ONE of the fields long neglected by gas utilities is the consumer potential contained in the "fringe area" surrounding the utility property itself. Within the past few years there has been, and probably will continue to be, considerable construction in new sections and subdivisions around the perimeter of towns of all sizes.

Many of these newly constructed sections are so small or so scattered that they do not warrant the labor and expenses involved in major extensions of the gas mains.

Only recently have butane-propane gases commenced to come in to their own as a means of alleviat-

ing this condition. This article explains how one utility company solved the problem of gas service "beyond the mains."



RICHARD S. LEE

Company Organization

The United Cities Utilities Co., Chicago, through its several subsidiary companies, supplies gas to 17 cities ranging geographically from Hastings in southern Minnesota, into central Wisconsin, southern Illinois, Tennessee, North and South Carolina and to Gainesville, Georgia. Two of these cities, Hastings, Minn. and Vandalia, Ill., are supplied with natural gas, while the remaining 15 cities are served with butane-air gas through underground mains. The two natural gas properties were originally butane-air, also, but were converted to natural in 1941 and 1942.

These properties have been operated by United Cities since 1932 and it is believed that this is one of the first utility companies to make exclusive and wide-spread use of butane-air gas for city distribution via underground main systems. (For complete list of sub-

* Metrogas, Inc., is an affiliate of the United Cities Utilities Co. and serves bottled gas in the areas surrounding the utility properties.

sidiaries, types and values of gases served, see Table 1.)

Prior to the advent of World War II preliminary plans were discussed for some means of getting gas service to the potential customers in the "fringe area" surrounding the several utility-served cities. There were large numbers of persons either in the cities beyond the mains or in the adjacent rural areas who desired gas service but who could not, for various reasons, be served from the existing main systems.

Naturally, with the outbreak of war, the initial plans were shelved for the duration inasmuch as restrictions on non-essential produc-

tion made it impossible to initiate the necessary construction and purchases. However, in the latter part of 1945 after cessation of hostilities, the plans were brought out, reviewed and modified to suit existing conditions of material availability, and initial orders for material and equipment were placed.

The final result was the formation of Metrogas, Inc., a separate corporation, which is now engaged in selling propane in cylinders and tanks in and around the original utility properties. Eleven of the 17 towns are now being served and facilities for the remaining six are nearly completed. Metrogas, Inc., has main offices in Chicago and



A "New Freedom" gas kitchen on the display floor of the Southeastern Illinois Gas Co., Metropolis, Ill. Each subsidiary office of the United Cities Utilities Co. has a kitchen planning center of which a similar display kitchen is the nucleus.

each utility office is also a field office for Metrogas, Inc.

Metrogas, Inc., was organized and is owned by the employes and officers of the United Cities Utilities Co., who purchased the stock to provide the necessary capital to get the business started. The principal officers and operating personnel are:

Arthur K. Lee, chairman of the board of directors; Ralph L. Sieben, president and director; Robert M. Fisher, vice president, treasurer and director; J. K. Calhoun, secretary; W. O. Croft, advertising and sales promotion manager; Edwin Henes, C. Benson Dushane and Oswald Maland, directors; Harold J. Reekie, Northern Division manager; H. C. Lewis, Illinois Division manager; Richard S. Lee, Eastern Division manager.

Zones of Operation

At the present time Metrogas, Inc., limits its field of operations to within a radius of 25 miles from each of the utility properties. It is felt that in view of current equipment problems such a limit will be more conducive to the formation of a saturated market area, eliminate to a great extent the economic dangers of spreading "too far and too thin," and will make possible the maintenance of a fast and efficient service plan. Expansion beyond this 25 mile limit may ultimately be made, however, and plans have been formulated accordingly.

Plant Facilities

Three bulk storage and cylinder-filling plants have been erected or are under construction. Locations

for additional plants have been selected and these will be added as required. The initial equipment of each plant consists of the following items: one 18,000 gallon propane storage tank, one 1000 gallon bulk delivery tank truck, one 1½ ton stake truck with winch and boom to handle large tanks, one ¾ ton pick-up truck for cylinder deliveries and service calls and one complete cylinder-filling plant including liquid pump, compressor, scales, loading dock and so forth.

Three combination shops and warehouses are also completed or nearly so. In these buildings, in addition to space for appliance and equipment storage, are complete facilities for all types of gas conversion jobs, meter testing and repairing, regulator and equipment repair and appliance adjustment and maintenance. In addition to the bulk plants mentioned, a propane standby plant to augment the natural gas supply at Vandalia is nearly completed.

Distribution Policies

The first two bulk plants were so located as to permit servicing of all towns in the eastern and central divisions. These plants are at Hendersonville, N. C., and Metropolis, Ill. From these two plants all but four of the 17 towns can be served. In the Northern Division at the present time propane is being purchased from an existing firm and sold under the registered trade-name of Metrogas.

Generally speaking all gas sold within a radius of 25 miles from each plant is by bulk delivery to

containers of 100 gallons capacity or larger. Except for commercial and industrial loads, the 100 gallon ICC container is the most common. To all towns not having bulk plants the gas is shipped either by common carrier or company truck in 100 pound ICC cylinders to the lo-



cal loading dock and then delivered in smaller trucks to the customer by the local service personnel.

In all cases, straight commercial propane is used and all containers are aboveground. With rare exceptions, all gas, whether in bulk or cylinder installations, is metered. With the end in view of providing uninterrupted service, each customer beyond the 25 mile bulk delivery area is provided with two, 100 pound, ICC cylinders with automatic change-over manifold.

The meter rates are of the sliding scale type on a therm basis. Meters are read monthly and bills submitted by mail to the customer

for gas used during the preceding month.

All containers and equipment are owned by the company and leased to the customer. Reasonable charges are made for labor and materials used beyond the meter outlet.

Every effort has been made to provide tested and approved equipment and in line with this special care is taken to see that all valves, regulators, change-over manifolds and so forth are protected from the elements and from tampering. Sturdy concrete bases for all types of containers provide durable and attractive installations.

Service

It is generally recognized that a progressive and profitable business of any kind must offer satisfactory service to the customer. This is most certainly true of the B-P Gas industry. With this fact in mind, every effort has been made to provide trained gas service men to deliver, install, adjust, repair and maintain all types of gas appliances and to make all installations in accordance with existing regulations and recommendations of advisory agencies.

The highly trained and fully experienced service personnel of the utility have contributed greatly to this effort. Also, competent and ambitious veterans are trained under the several provisions of Public Laws 16 and 346—the G. I. Bill of Rights.

The company feels that the customer is entitled to any service which might be necessary to keep his or her appliances operating at

TABLE 1. OPERATING PROPERTIES OF UNITED
CITIES UTILITIES CO., CHICAGO

<i>Subsidiary</i>	<i>Type of Gas</i>	<i>Btu/Cu. ft.</i>	<i>Sp. Gr.</i>
B-V Pipeline Co., Chicago	(Transmission only)		
Hastings Gas Co., Hastings, Minn.	Natural	1000	.68
Central Wisconsin Gas Co., Sparta, Tomah, and Waupaca, Wisc.	Butane-Air Butane-Air Butane-Air	530 530 530	1.16 1.16 1.16
Southeastern Illinois Gas Co., Vandalia, Harrisburg, Eldorado, and Metropolis, Ill.	Natural Butane-Air Butane-Air Butane-Air	1050 530 530 1000	.63 1.16 1.16 1.32
Tennessee Gas Co., Union City, Columbia, Shelbyville, Murfreesboro, Marysville and Morristown, Tenn.	Butane-Air Butane-Air Butane-Air Butane-Air Butane-Air Butane-Air	500 1300 500 1300 1300 500	1.16 1.41 1.16 1.41 1.41 1.16
Carolina Central Gas Co., Hendersonville, N. C.	Butane-Air	540	1.16
South Carolina Gas Co., Gaffney, S. C.	Butane-Air	1300	1.41
Georgia Gas Co., Gainesville, Ga.	Butane-Air	1300	1.41
<i>Affiliate</i>			
Metrogas, Inc. Chicago. Field offices in towns listed above. Bulk storage and filling plants: Vandalia, Ill., Metropolis, Ill., Hendersonville, N. C. Propane standby plant: Vandalia, Ill.	Propane	2521	1.52



Bulk plant and portion of the equipment of Metrogas, Inc. at Metropolis, Ill.

peak efficiency. However, to guard against the chronic complainer, a charge is made for all service calls in excess of two per calendar month. Because calls in rural areas especially are time-consuming and costly, it is essential that a good and complete job be done on the first trip.

While Metrogas, Inc., as a firm, is new, it has behind it the 15 years of executive, managerial and operational experience of the United Cities Utilities Co., one of the pioneers in butane-propane operations.

Conclusion

Metrogas, Inc., has found (as has most everyone) that the year 1946 was one of innumerable disappointments, broken promises, equipment shortages and many other thorns in the path of progress. Equipment promised for delivery in a certain month began to come two to four months later and some has not yet arrived at this writing. Building materials were often difficult or im-

possible to obtain and local labor was sometimes almost nonexistent. The shortage of steel, copper tubing, black pipe and other necessary items has delayed much of the original construction and consumer installations.

These troubles, of course, were founded on labor difficulties and union controversies and in no way reflect on individual suppliers who seem to have done a remarkable job in spite of great handicaps. When it is realized that not one item had been on order prior to October, 1945, the resultant construction and expansion has reasonably approached expectations and many customers now enjoy the use of gas for cooking, water-heating, space-heating and refrigeration.

It is believed that in the years ahead Metrogas, Inc., will be the major distributor of LP-Gas in its market areas and will return adequate profits to its incorporators while rendering a valuable service to the communities it serves.

Space Heater Market on the Pacific Coast

By J. E. WYATT, JR.

Executive Vice President, Dearborn Stove Co., Dallas, Texas

GAS space heater manufacturers face a market in California, Washington, Oregon, Arizona and Nevada which can potentially absorb 3,111,198 units. This total is a conservative estimate based on 1940 census figures and includes the replacement needs of homes using gas heat and those homes using wood or coal which might be converted to LP-Gas.



J. E. WYATT, JR.

If we project population and dwelling unit data on the premise that in 1940, 73.4% of the homes in these states were without central heat and that 22.2% of new dwellings built in the U. S. between 1940-45 were constructed in this area, the potential can be upped another 1,389,131.

California represents by far the greatest share of possible sales in this area. In 1940, 97.61% of the homes in the five-state area using gas for space heaters were in that state. So, too, were 42% of possible future LP-Gas consumers; homes now using coal or wood. There are 29 LP-Gas producers in the state

of California which indicates the growth in the use of this fuel. As no figures are available to indicate the number of individual installations of LP-Gas, any estimate of possible heaters in use could be only surmise, which is not of much value in assaying potential sales.

Any appraisal of market potentials must necessarily be a projection of facts and figures whose reliability is unquestioned. For the purpose of scanning possible future sales of gas space heaters in the three West Coast states, as well as in the economically related states of Arizona and Nevada, I have used statistical data from the Bureau of Census, the Federal Power Commission, and other reliable publications as the basis for my analysis.

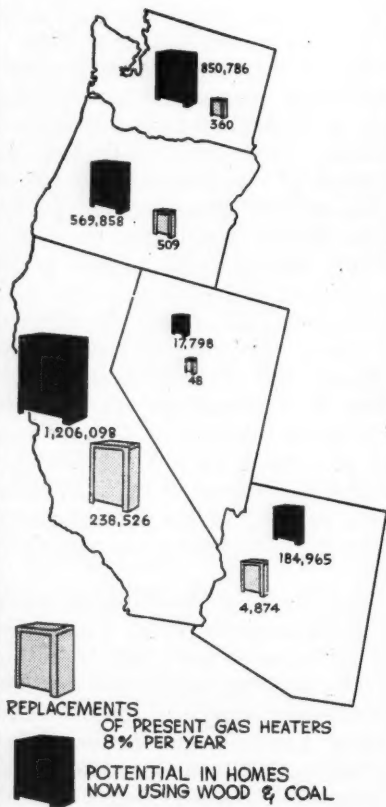
Manufacturers who plan to market gas space heaters in this area might be interested in a state-by-state analysis of the market as our research department has visualized it.

The State of Washington seems of comparatively small present or future value to gas stove manufacturers seeking sales outlets. The tremendous supply of low cost electricity provides the primary fuel in use and it seems unlikely that other types will seriously alter this situation.

In 1940 only 1450 homes used

Pacific Coast Space Heater Market at a Glance

Replacements and Potentials in
Washington, Oregon, California,
Nevada and Arizona



gas as a fuel for space heating. This represents but .4% of the total number of dwellings. Only manufactured, butane, and butane-air gases are served in the state and total heating loads are comparatively light.

Liquid fuel enjoys a far superior position within the state as is evidenced by the fact that 48,310 or 14.2% of homes are heated by this means.

Some 80% of homes which have no central heat, 274,447 in 1940, now use wood or coal, which offers a potential to LP-Gas or liquid fuel space heaters.

Where the Potential Lies

Using the industry average of 8% replacement annually, only 360 space heaters are required in homes now using gas for space heating. The potential for LP-Gas in Washington lies in those homes using wood and coal for space heating. Applying the yardstick of 3.1 units per home, 850,786 heaters could be conceivably sold, provided, of course, that the LP-Gas business in the state is greatly expanded.

Only through an increase in LP-Gas installations is there any likelihood of an increase in the use of gas for space heating in Oregon. In 1940 only 2052 homes in the entire state used gas for space heating, only 1% of the total. There is no natural gas served in Oregon.

Again, dependent upon wide expansion of LP-Gas distribution, a possible market for gas space heaters or else liquid fuel heaters exists in 189,726 homes using coal or

wood in 1940. A potential of 569,858 units could be marketed in Oregon should a sufficiently enlarged LP-Gas program be completed.

As it is, only a replacement total of 509 gas space heating units can be sold in the state. This represents a dollar volume of only \$7136, based on an average dollar price of \$14.02 per unit.

Huge Increase in Population

The population of California has increased nearly 40% since 1940 to a total at present of 9,665,000 inhabitants. In 1940 homes without central heat numbered 1,572,592, or 75.7% of those in the entire state. Since 1940 many thousand new dwellings have been constructed and these largely in areas where natural gas is the usual fuel.

Gas space heating is provided in 961,797 homes, which is 61.2% of all residences. Here indeed is the core of the Pacific Coast market, with 8% of the total of United States natural gas reserves being a guarantee of continued reliance on gas space heating.

The extent of LP-Gas installations is unknown, but from the number of LP-Gas producers active in the state, it seems safe to assume that this potential outlet for gas space heaters is growing rapidly.

Exclusive of the individual LP-Gas installations, we find that there were, in 1940, a total of 2,981,571 gas space heaters in use. Applying the yardstick of 8% of units yearly, it becomes evident that 238,526 space heaters are required annu-

ally for replacement in California.

The sales possible should those homes now using wood or coal convert to LP-Gas amount to 1,206,098 units. A most conservative sales manager can envision the impact of a 40% population increase on these figures.

Nevada could consume 17,798 gas space heaters if all homes now using wood or coal were to be converted to LP-Gas. This seems a rather fantastic possibility from the present viewpoint, since 23.9% of homes using other than central heat consume oil as the heating fuel. However, an aggressive LP-Gas program could gain many adherents to gas as a fuel and thus pave the way for considerable sales of gas space heaters from the 67% of homes heated with wood or coal.

At present an annual replacement sale of only 48 heaters within the whole of the state is not sufficient business to warrant the expense of having a salesman canvass the territory.

Arizona Market Is Bright

Of the 115,827 Arizona homes (92.1%) without central heat in 1940, 19,654 were using gas, the space heating fuel. Gas ranks third in use among the four types of fuel. The new California pipeline crossing the state may increase the use of natural gas, but here again the largest potential will accrue as LP-Gas installations spread.

The 51.1% or 59,666 homes now using wood or coal is the potential for LP-Gas or liquid fuel. A possible 184,965 gas space heaters

would be required to supply this potential should LP-Gas be chosen to replace the solid fuels. Replacement of 4874 units is required annually to replace worn out heaters in homes now using gas.

The Bureau of the Census has released information disclosing that the population in the Pacific States area is moving from rural farm areas to urban centers. This fact is of primary interest to manufacturers of gas space heaters. It demonstrates that the fuel supplier has

a major task ahead of him in providing for heating needs. It is to the interest of gas heater producers to encourage the spread of natural gas systems, of manufactured gas distribution, and especially to facilitate greater use of LP-Gas in urban and rural-urban areas. It seems evident that the spread of LP-Gas installations must precede any considerable growth in the market for gas space heaters in the five states discussed in this article.

LP-Gas Makes Bid For Lead in Canada

By PHIL GLANZER
Toronto, Ontario

LIQUEFIED propane gas is now making a serious bid for a share of the domestic and commercial cooking and water heating markets in Canada.

Recently, Imperial Oil Co. announced entry into the new field in the East and the Hugh Gas Co., Regina, Sask., has started marketing operations in the West.

Imperial does not plan to compete in areas already served by manufactured or natural gas but expects its main markets to be in localities away from gas lines, e.g., suburban city areas, villages, summer resorts, certain farming districts. Sizeable demand is already indicated from restaurants and hotels not provided with gas service.

Imperial officials in Canada estimate that there might ultimately be some 100,000 domestic consumers in

Canada, as compared to the three and a half million users in the United States.

For the present, Imperial intends to confine its marketing activities to southern Ontario. Bulk plants are being erected at Stratford, Maple and Carleton Place. Capital equipment to refine, transport, store and market propane is costly and for the time being, both Imperial and the western company are importing the liquefied gas from the United States. As the market develops, however, Imperial plans to install refining equipment.

In line with the new program, both companies have entered the gas equipment field as well. Already Imperial's liquefied petroleum gas division is handling gas ranges for domestic, restaurant and hotel use. It will soon be prepared to handle all gas burning appliances such as refrigerators, water heaters and small space heaters.

Hugh Gas Co. has installed an 18,000 gallon storage tank and bottling plant in Regina. Distribution to dealers and users is handled through use of cylinders filled locally from the large storage plant.

It Costs Money to Make Small Deliveries

HOW MANY gallons of fuel does your truck deliver for every mile your truck is operated?

This pertinent question is asked Kansas dealers in a recently released bulletin of the Kansas Liquefied Petroleum Gas Association which is making a highly successful effort to increase consumer storage capacities of butane and propane users in the state of Kansas.

From the several reports submitted by fuel operators to the Association, according to R. H. Mahnke, executive vice president, it is interesting to note the great differences in gallons per mile and it has been found that the total delivery cost per gallon is directly affected by this factor.

Table No. 1 is a compilation of figures supplied by 10 Kansas dealers who sent reports of their activities to the Association office.

Analysis of these figures shows that:

1. The more gallons delivered per

mile of truck operation, the less the total delivery cost per gallon.

2. While the delivery cost per mile of truck operation varies greatly, this does not necessarily reflect a large increase in delivery cost per gallon when a larger quantity of gallons are delivered per mile driven. This is exemplified very clearly by dealer "D."

3. In order for a truck driver to deliver more gallons per mile, he must have consumer storage where large amounts of fuel can be delivered instead of driving many miles to smaller tanks where lesser amounts can be delivered.

4. A condensed area of customers can be served more economically than a wide spread territory.

F. E. Sutton Opens Testing Station in Harlingen, Texas

F. E. Sutton, of Harlingen, Texas, has recently opened an ICC cylinder testing station.

Type 4B240 butane-propane cylinders will be tested by the hydrostatic process. Mr. Sutton also has approval of the Texas Railroad Commission.

TABLE 1. PERIOD INCLUDED—JAN.-FEB.-MAR., 1947

Dealer	Miles Driven	No. of Trucks	Total Gal. Delv'd.	Gals. Delv'd. Per Mile	Wages to Drivers	Delv'ry Cost Per Mile	Delv'ry Cost Per Gal.	Driver Cost Per Gal.	Total Del. Cost Per Gal.
A	14,079	2	164,281	11.67	\$1,399.11	.09	.0077	.008	.0157
B	11,759	1	79,622	6.77	765.00	.12	.0177	.010	.0277
C	7,433	2	88,616	11.92	1,359.40	.15	.0125	.015	.0275
D	8,370	2	186,440	22.27	1,631.70	.16	.0073	.009	.0163
E	37,470	4	340,000	9.07	3,380.00	.06	.0065	.010	.0165
F	7,541	1	44,865	5.95	570.00	.12	.0202	.013	.0332
G	16,893	2	198,892	11.47	1,407.02	.15	.0131	.007	.0201
H	4,487	1	43,996	9.80	497.70	.135	.0138	.011	.0248
I	6,279	1	50,620	8.06	396.42008	...
J	53,513	7	534,941	10.00	4,553.20	.12	.0120	.0085	.0205

New LPGA Officers

President

Tallent H. Ransome, president, Ransome Co., Emeryville, Calif.

District Vice Presidents

Walter A. Naumer, manager, "Pyrofax" Gas Division, Carbide and Carbon Chemicals Corp., New York City (1st vice president).

Kenneth H. Koach, general manager, Green's Fuel, Inc., Sarasota, Fla. (2nd vice president).

D. D. Purrington, Oakland, Calif.
Lon Turner, Denver, Colo.

E. J. Gustafson, Sioux Falls, S. D.
W. G. Petty, Sr., Memphis, Tenn.

Treasurer

Chas. O. Russell, retiring president, LPGA, and president, Thermogas Co., Inc., Des Moines, Iowa.

Secretary

Arthur Kreutzer, LPGA, Chicago. (Also assistant treasurer.)

SECTION OFFICERS

Producers—H. W. Rigtterink, Sun Oil Co., Philadelphia, chairman.
Fred S. Schwend, Warren Petroleum Corp., Tulsa, secretary.

Appliance Manufacturers—Lloyd C. Ginn, American Stove Co., Cleveland, chairman. James Gorton, Gas Appliance Manufacturers Association, secretary, pro tem.

Marketers—J. Richard Verkamp, Verkamp Corp., Cincinnati, chairman. Thornton Casey, Butane Sales & Service Co., Centralia, Ill., secretary.

Equipment Manufacturers—Kenneth R. D. Wolfe, Fisher Governor Co., Marshalltown, Iowa, chairman. Robert E. Poethig, The Bastian-Blessing Co., Chicago, secretary.



Tallent H. Ransome, president, LPGA.



WALTER NAUMER



KENNETH KOACH

STANDING COMMITTEES

Appliance Specifications—Floyd F. Campbell, Bartlesville, Okla.

Constitution and By-Laws—H. H. Torbit, Pueblo, Colo.

Finance—H. K. Strickler, Erie, Pa.

Insurance—Edward C. McEneany, Walnut Creek, Calif.

Legislative—Kenneth W. Rugh, Bartlesville, Okla.

LP-Gas Specifications—Gerald L. Brennan, Tulsa, Okla.

Membership—J. L. Grigsby, Oklahoma City, Okla.
Advertising and Publicity—Si G. Darling, Pratt, Kans.
Safety—F. T. Carpenter, Minneapolis.
Technical and Standards—Walter Miller, Chicago.
Transportation—George W. Bach, Kansas City.

LPGA Holds Its Largest Convention

By PAUL LADY

MORE than 1000 industry men gathered in Chicago last month to attend the annual national convention of the Liquefied Petroleum Gas Association.

By far the largest and most successful meeting of its kind ever to be held by the Association, the 1947 gathering brought together LP-Gas men from every section of the country.



Chairmen of new sections, LPGA. **LEFT:** H. W. Riggerink, Solgas Division, Sun Oil Co., Philadelphia—Producers Section. **BELOW:** (Left): J. Richard Verkamp, Verkamp Corp., Cincinnati—Marketers Section. (Center): Kenneth R. D. Wolfe, Fisher Governor Co., Marshalltown, Iowa, and Robert E. Poethig (seated), The Bastian-Blessing Co., Chicago, secretary—Equipment Manufacturers Section. (Right): Lloyd C. Ginn, American Stove Co., Cleveland—Appliance Manufacturers Section.



KANSAS CITY IN '48

It's Kansas City in '48. That is the announcement to come out of LPGA's Chicago meeting regarding the city chosen for the 1948 annual convention of the Liquefied Petroleum Gas Association.

Although no definite date has been set, tentative plans call for the meeting in June.

Official registration totaled 953 for the three-day show—May 27-29. However, the sale of special tickets for luncheons showed the attendance numbered well over the 1000 mark.

The newly elected officers for 1947-48 are Tallent Ransome, president; Walter H. Naumer, 1st vice president, and Kenneth H. Koach, 2nd vice president.

Putting no emphasis on any one activity, the convention offered a well-balanced program of business meetings, displays and social events. Top interest centered around the exhibit hall where 80 booths were used by 51 of the nation's manufacturers of equipment and appliances for the liquefied petroleum gas industry to present their products to a crowd of interested LP-Gas men and women representing every state in the union as well as many foreign countries.

One of the more important organizational activities to come out of the Chicago meeting was the forming of four new sectional groups which will carry on activities vital to the Association. These

are to be known as the Marketers Section, Equipment Manufacturers Section, Appliance Manufacturers Section and Producers Section.

These groups will in the future plan and guide Association work related to these industry activities.

Much of the second afternoon of the convention was devoted to the formation of these groups, election of permanent officers and discussion of topics related to the various sections. Section officers are listed elsewhere.

Important Tuesday morning committee meetings were held to discuss industry problems. These committees and their chairman were: Transportation committee—G. W. Bach; Income committee—A. R. Thomas; Publication committee, Frank Boice; LP-Gas Specifications Committee, G. L. Brennan.

Papers and speeches presented at the meeting covered a variety of topics vital to the industry.

H. Carl Wolf, managing director of the American Gas Association, spoke on the relationship of the LP-Gas and gas industries. He said that in order to grow, the LP-Gas industry must build on a firm financial basis and must make service an important cornerstone. We will never have a final solution of our problem of supply but sound financial responsibility will make supply problems easier. Larger dealer storage will be necessary to guarantee adequate supply . . . Nothing can take the place of sales planning and preparation . . . Manufacturers and dealers must work together on this.



The new president and eight past presidents of the Liquefied Petroleum Gas Association were honored at the annual convention (May 27-29) at a special luncheon. At the extreme left is the newly elected president, Tallent H. Ransome, who is congratulating (left to right), Charles O. Russell, Des Moines, Iowa; Ernest Fannin, Phoenix, Ariz.; Louis Abramson, Jr., New Orleans; George Bach, Kansas City, Mo.; J. Woodward Martin, Dallas, Texas, and H. Emerson Thomas, Westfield, N. J. Unable to attend the meeting were past presidents Mark Anton and Walter Verkamp. The eight were presented with scrolls of appreciation and silver mounted, engraved, cherry wood gavels.

On the subject of cooperation between the LP-Gas and gas industries, Mr. Wolf urged that they work together. He believes they will. Some companies already have done so to their mutual benefit. It is important to sell the public on using gas. "To accomplish this we must explore the importance of working together."

AGA exists to serve the gas industry. It should be the duty of all branches of the industry to cooperate.

Mr. Wolf announced that a committee has been appointed to study the relations of the two industries and to try to bring them together on a common ground.

Bennett S. Chapple, vice president of sales, United States Steel Corp., of Delaware, spoke on "The Outlook for Steel." The steel industry, he said, appreciates the im-

portance of the LP-Gas market. Realizing that it is much more important to own a market than a mill, the steel industry is trying to meet demand.

Where is the steel going? Why is more not available? In answer to these questions Mr. Chapple said: "One of the principal problems of the steel industry has been the transition from war time steel mix to peace time mix. War time mix has more standard. Peace time demands call for more kinds of steel."

J. Van Norman, Louisville, Ky., chief counselor for LPGA freight rate case, spoke on "The Progress and Prospects for Freight Rate Adjustment." Mr. Norman reviewed the case thus far and stated that the hearing on LP-Gas freight rates, scheduled for Washington June 24, should bring a definite conclusion.

State Chairmen

Alabama—Selwyn Turner, Mobile.
 Arizona—Ernest Fannin, Phoenix.
 Arkansas—R. J. Dodson, Magnolia.
 California—E. E. Adams, El Cajon.
 Colorado—C. R. Husted, Denver.
 Connecticut—F. S. Hyde, Waterbury.
 Delaware—Stanley H. Keen, Wilmington.
 Florida—E. Reed Whittle, Orlando.
 Georgia—Wendell B. Wight, Albany.
 Idaho—L. V. Rothrock, Twin Falls.
 Illinois—T. E. Ennett, Rockford.
 Indiana—Tie vote, decision later.
 Iowa—R. L. Buckingham, Cedar Rapids.
 Kansas—Si G. Darling, Pratt.
 Kentucky—P. G. Boyd, Fulton.
 Louisiana—Louis Abramson, New Orleans.
 Maine—Peter A. Anderson, Portland.
 Maryland—L. L. Parlett, Waldorf.
 Massachusetts—W. F. Muhlbach, Gardner.
 Michigan—John Pankow, Detroit.
 Minnesota—David Baille, Albert Lea.
 Mississippi—J. W. Gotcher, Clarksdale.
 Missouri—George W. Ryan, Kansas City.
 Montana—J. J. Kirby, Great Falls.
 Nebraska—L. R. Forsyth, Omaha.
 Nevada—H. W. Wickstrom, Las Vegas.
 New Hampshire—W. S. Twohig, Westville.
 New Jersey—H. Emerson Thomas, Westfield.
 New York—George A. Burrell, New York.
 North Carolina—W. S. Lander, Charlotte.
 Ohio—G. "Bill" Wright, Mount Orab.
 Oklahoma—Kenneth W. Rugh, Bartlesville.
 Oregon—Carl W. Hopp, Portland.
 Pennsylvania—Harry K. Strickler, Erie.
 Rhode Island—H. H. Dauphinee, Providence.
 South Dakota—E. J. Gustafson, Sioux Falls.
 South Carolina—F. P. Prettyman, Summerville.
 Tennessee—W. G. Petty, Sr., Memphis.
 Texas—Feild Foster, Dallas.
 Utah—Orson P. Wright, Salt Lake City.
 Virginia—E. O. N. Williams, Richmond.
 Washington—Stewart Matthews, Seattle.
 West Virginia—Paul E. Peacock, Jr., Martinsburg.
 Wisconsin—Verne Mueller, Medford.
 Wyoming—George Gibson, Lusk.

The issues include: The railroads want higher rates on LP-Gas than on gasoline and kerosene because they involve (a) greater hazard, (b) heavier weight of car.

The LP-Gas industry's answer has been: Because containers are stronger, loss and damage from LP-Gas transportation is insignificant; thus, loss and damage claims are less. Also, the value of the gas transported is less. A formal complaint has been filed by the Association asking that present weight of 4.7 lbs. per gallon be maintained and that the present rate be lowered from the 40% increase put on by railroads.

It is the general belief of the Transportation committee of the Association under the chairmanship of Geo. W. Bach, that the industry will win its fight for lower rates and lower weight per gallon.

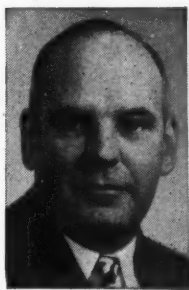
Frank Carpenter, United Petroleum Gas Co., spoke on the subject of safety. Using a series of slides to illustrate his talk, he forcefully pointed out that the industry must pay more attention to installation practices.

Far too many installations are being made by men who do not know what they are doing. Many have not been shown how and what they should do.

Many industry members think equipment approved by the Underwriters Laboratories is sufficient to guarantee a safe installation. This is not true. It must be installed and used properly if it is to give safe service.



H. CARL WOLF



H. H. TORBIT



G. L. BRENNAN



H. K. STRICKLER

The pictures, which have been taken over a 10-year period, showed rank disregard for safety in transportation, storage and installation. He finished by saying: "There must be a safety program in the industry . . . this program must be an extended one . . . dealers must realize that equipment, alone, will not guarantee safety; the installation must be right."

Mr. Carpenter was enthusiastic in his praise of the Association for engaging John Knox Smith as a safety engineer. It is a great step forward, he believes, and can do the industry good. (Page 86.)

Speaking on "Fuel Supply," Howard Felt, Warren Petroleum Corp., discussed at length the future of supply and demand. (Mr. Felt's paper in full is printed in this issue. See page 79.)

The last speaker was Benjamin F. Bills, marketing counselor of Chicago. Mr. Bills talked on modern merchandising methods. The sellers' market of the past few years is definitely over, he believes, and dealers must aggressively mer-

chandise their products and their services if they are to successfully compete with other fuels.

In order to express the appreciation of present members of the Association to the past presidents who have guided the activities of the organization since its inception, a fitting and colorful program was held during the President's luncheon on Thursday.

Under the capable hands of Carl Sorby, who conceived the idea and carried it through to a successful conclusion, the tribute emphasized to all present the fact that the success of the Association thus far has depended to a large extent on these men.

After Mr. Sorby's talk, all of the past presidents were presented with certificates bearing messages of gratitude from the Association, along with gavels.

The list of past presidents honored included: Mark Anton, Emerson Thomas, Geo. Bach, Woodward Martin, Walter Verkamp, Louis Abramson, Ernest Fannin and Charles Russell.

Michigan Association in Action



ABOVE: Officers of the Michigan LP-Gas Association elected at recent spring meeting. Left to right (seated)—R. H. Stinger, president; Earl St. Cyr, vice president; Lou Marshall, secretary-treasurer. Standing—J. O. Reavis, B. L. Launstein, H. Richards and C. Habermehl, directors. **BELOW:** Michigan dealers who attended the Association meeting where plans were laid for a strong safety training program to be developed through a system of training and education.



Fuel Supply

Industry Expansion Hinges on Maximum Use of Propane

By HOWARD E. FELT*

Vice President, Warren Petroleum Corporation, Tulsa, Oklahoma

THERE isn't much use of reviewing the rapid growth of this business. You can look at your own business and get a complete understanding of that phase. But, we do have to go back to the beginning of the war to remind ourselves that the urgency of the program for high octane gasoline and synthetic rubber required the production of the last drop of normal and isobutanes. Each refinery, gasoline plant and cycling plant went all out. Consequently, from then until now we have had maximum production of butanes. During the same period our domestic distribution was held quite rigidly in check by war regulations, lack of bottles, tanks and appliances.

The extent of this war effort on production is revealed in figures of the Bureau of Mines and Petroleum Administration of War. The



H. E. FELT

year 1942 was one of construction, but by 1943 the production of LPG was 1,588,000,000 gallons. In 1944 it jumped to 3,820,000,000 gallons, and in 1945 to 4,833,000,000 gallons, an increase of over 3 times the 1943 production. During this same period domestic consumption only went from 339,000,000 gallons to 533,000,000 gallons, or only 1.6 times the 1943 consumption.

The startling thing about these figures is the number of gallons that were produced over the domestic sales. In 1943 this balance was 4 times domestic sales and in two years it grew to 8 times domestic sales. It is no wonder it was said that the industry could not absorb this swollen war production.

But, what happened? The winter of 1945 and 1946 had most suppliers in an uncomfortable position—and this past winter is all too fresh in our minds to require comment.

What are some of the lessons we should learn from this short post-war period in the development of this industry? Let me remind you of a few:

1. LP-Gas has apparently unlimited public acceptance for its many purposes.
2. It is dangerous to count on sup-

* A paper presented before the annual meeting of the Liquefied Petroleum Gas Association in Chicago May 29.

plies without adequate planning for distribution.

3. We must make full use of propane, either as such, or in higher vapor pressure mixtures.

4. New uses and expanded old uses are developing more rapidly than available supplies can reach those thirsty markets.

Lesson No. 1 needs no comment, but the NEMA brochure to the electrical industry is a very strong reminder that we cannot go to sleep.

Lesson No. 2 (adequate planning) gets me a little off base into distribution, but methods of distribution have a tremendous bearing upon your supplies. Butanes and propane are produced by their manufacturers in approximately the same quantities each and every day. But, the demand in the domestic uses varies seasonally. It is imperative that every gallon produced be saved for its immediate or deferred use, and that requires storage at points of production and distribution.

Obviously, the producer and distributor cannot provide all that is necessary, and, therefore, the consumer must be relied upon to carry his part of the burden in larger tanks in his backyard if he intends to use it for heating his home, office or factory, or other strictly winter uses.

I think we are making progress along these lines, but right at this very moment there are thousands of gallons of butane and propane going back in the ground, being burned in flares and under refinery boilers that we will need very badly next winter. Present indications are that we will experience another winter of short

supplies of all types of fuel: coal, oil, natural gas, and LPG. Right now coalbins and oil tanks are being filled with next winter's supplies and it behooves us to make every effort to encourage our consumers to plan ahead for their peak requirements.

Solution in Consumers' Hands

The necessity for storage at the point of use cannot be overemphasized. It is generally agreed that producers and distributors cannot provide extraction and storage facilities on a year-round basis of sufficient capacity to meet peak winter requirements. The consuming public must be convinced that the LP-Gas industry cannot even provide sufficient transportation to meet the winter requirements if this equipment is to be largely idle from May to September. Therefore, in order to operate on a uniform basis, butane and propane must be shipped from points of production at a uniform rate and held in distributor and consumer tanks to satisfy the immediate fluctuations in demand.

Lesson No. 3 involves the necessity for maximum utilization of propane. It hasn't been too many years ago that propane was a bothersome stepchild of the petroleum industry. It was too wild to go into gasoline, took up valuable space in fractionating towers, and it was heavy enough to cause some difficulty in gas transmission lines.

Consequently, the propane and also some butane had to come out. Too much credit cannot be given to those hardy pioneers who visualized and found a market for the propane that was then further separated from butane. That is now the bottled gas end of our business.

A lot of our plants before the war could not separate the propane from the butane, so another gang of hardy

pioneers, mostly in the south and southeast, started selling the mixtures—the two making up the LPG industry. Their interest in supplies then did not compete because the bottle group only wanted propane and their sales were more even over the year—in fact, heavier in the summer because of the predominant use in cooking, hot water heating and refrigeration. Both groups had, and still have, the all-consuming common purpose of promoting the use and sale of liquefied petroleum gases.

Now, however, they have a common interest in both butane and propane because they are both dependent on the maximum exploitation of both products and because propane must make up the deficiency of butane in the overall demand. That's why bottled gas distributors should be very much interested in the waste of butane as well as propane.

The reason I am emphasizing the maximum use of propane can be realized from the fact that today plants, which are designed to recover 95 to 100% of butanes, only recover from 10 to 40% of available propane. That is because to recover more, costs increasingly more per gallon.

By this I mean that to recover more propane than the amount originally planned requires a larger plant all the way through (such as more oil circulation, refrigeration, etc.) so that the cost of recovering each gallon above the original plans mounts as the percentage of extraction increases. (The cost of extraction above approximately 60% to 70% is almost prohibitive in most plants.) But, the value and the need for the product is now obvious; it is only a matter of the time necessary to install equipment and obtain transportation until this increasing production from present plants will be available to you.

The proof of what I have just said is already apparent. In 1942, of the total sales of LP-Gas, 26% was propane and now it is estimated that in 1946 propane represented about 43% of the total sales. The results of enhanced values in increasing the recovery of propane is also quite evident when Bureau of Mines figures show that for January and February of 1947 propane production was 88,500,000 gallons as compared with 48,300,000 gallons in the same period of 1946, or an increase of 83%.

It has not been so many years ago that butane did not receive much credit in the economic payout of a gasoline plant. When the war came along butane was finally counted on for its money value, but propane was incidental. Now, with its value and apparent need to the industry, pro-



pane will assume its share of plant economics, and I want to emphasize here that, in connection with adequate storage, propane is our only salvation in any effort to supply our industry.

New supplies will come, not only from new gasoline and cycling plants and improved extraction from old ones, but there is also a great potential supply still unrecovered in the processing of crude oil at refineries. Several of my refiner friends have told me that there is about 2% of propane in each barrel of crude oil processed that could be made available if the price were such that the necessary equipment would show a payout.

When I speak of the use of propane, I not only mean as a fuel by itself, but in the highest vapor pressure mixture with butane that your equipment will handle without jeopardizing that most all-important and paramount factor of this business—SAFETY. Always remember: no problem of supplies can be so important as to offer a compromise with safety.

Now, let's take a look at Lesson No. 4. Here, again, I must digress into the realms of marketing to show you how new uses and expanded markets developing faster than transportation of available production to adequate storage affect your supply outlook. I have had to change my tune enough times in the past few years to make my face a little pink. For instance, even as late as last summer I was as enthusiastic as anyone in urging a development of a summer load. I still think that is fine, especially for those of us who are producers, because, after all, our main concern is to see that our production moves each day into the best markets. But, from the supply side, I

would be a little derelict if I did not point out that fuel consumed in the summer will not be available in the winter any more than fuel that is wasted at our plants in the summer.

As a consequence, I urge that you conduct the growth of your business so that your supplies will balance out. In free enterprise the laws of economics will eventually balance any given situation so that costs of your product and of doing business will dictate whether LP-Gas should be saved for winter use mainly in the heat load, or used in so many worth while summer seasonal loads such as flame cultivation, dehydration, operation of stationary engines in lumber mills, irrigation projects, etc.; or, perhaps, a judicious spread of each with the use of adequate storage.

Then, any discussion of supplies must cover transportation. The two are inseparable. The LP-Gas demand has not only been running ahead of unbalanced production but of transportation. The shortage of steel and the unbalanced flow of various parts to the makers of tank cars has limited their production far below their shop capacities and the demand for tank cars. This shortage of tank cars has not only limited the amount of LP-Gas that could be moved but has caused a maladjustment of supplies, for the reason that areas around producing points that can be served by truck transports have received more of the available supplies than their share of the over-all total, which is needed by the country as a whole.

This has contributed to what might be an unhealthy expansion of the heat load in these areas and fostered small consumer tanks. If, and when, cars are available—and they are just now slowly reaching the industry—this maladjustment will gradually be corrected, but cars won't be the an-

swer to the supply problem if storage at destinations is not available for their contents. You can stack up idle cars at plants and refineries the same as you can waste the products.

Now, I have not yet answered the paramount question in your mind as to whether there will be enough butane and propane to satisfy the demand. I don't believe anyone, under present conditions, can furnish the answer as far as the future is concerned. I do feel, however, that with adequate transportation and storage to utilize all of the production, the present demand could be taken care of. And, I think that under the same conditions, we can take care of an expanding demand, if that expansion is carefully planned.

Certainly, there is every evidence around you to indicate the supplies will not keep up with demand if we keep on going the way we have been. We will not stop building gasoline and cycling plants. It is true the number built per year will be fewer than during war years, but their size and efficiency of extraction is larger and better.

National conservation demands we recover as much of our light hydrocarbons as possible, not only for LP-Gas but to save crude and for other uses. We cannot truthfully say that the LP-Gas industry is growing faster than supplies until we find ways of using every drop that is produced. My observation is that we probably have potential markets in excess of supplies—but, again, with those old immutable laws of supply and demand setting up values, some of these potential markets we foresee now will be taken care of in other ways.

A few things I am fairly sure about. One is, this LP-Gas business will reach far greater proportions in gallons sold than it has today, and

the other is that it cannot expand willy-nilly. No longer can you just keep on expanding as it suits your individual setup. You are not dealing in the waste product or the by-product of yesterday. You are dealing in a commodity of usefulness and value, and, as in any other stable business, it will be necessary in the future to consult with your suppliers and be reasonably certain you can serve your customers adequately and make your invested capital return you a fair dividend.

What this industry needs quite badly is current data on production and sales. This is a subject which could be explored by this Association, but it would be no easy job, nor could it be done overnight. Furthermore, it would require the cooperation of several allied associations and the Bureau of Mines, but your board might put the subject on its agenda for discussion at some future meeting.

I probably should not leave this subject of "Fuel Supply" without reviewing with you briefly some of the competition you have for these supplies from other industries.

The refining and natural gasoline industries, long faced with unbalanced seasonal supplies of light hydrocarbons, are conducting tests at this time to determine the maximum gasoline volatility and vapor pressure which can be used satisfactorily in engines of current design. These tests are likely to result in increased year-round vapor pressure, by increased use of propane as well as natural gasoline, thus accomplishing four purposes:

1. More uniform consumption of refinery light ends.
2. Motor fuel value will be realized for additional butane so consumed.
3. More gallons of finished gasoline will be produced.

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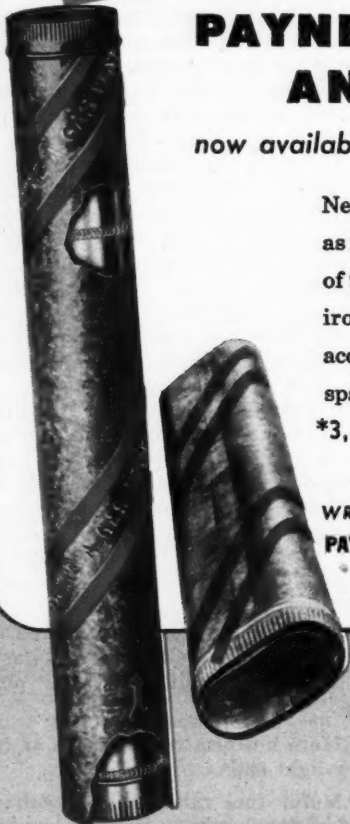
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4. Octane number of gasoline will be improved.

The sales of LP-Gas to chemical industries are growing rapidly and these consumers are well able to pay good prices for their raw materials. In addition, they offer uniform daily outlets on a year-around basis and are frequently locating their new plants near enough to the point of supply to make possible pipe line delivery of their requirements. This method of delivery enables these industries to pay a higher price f.o.b. the producing plant. The trend of construction of new chemical industries is toward the south and southwest and will definitely continue to be a strong competitor for liquefied petroleum gases.

You have read how the demand for natural gas from our transcontinental transmission systems is also unprecedented; therefore, many utility companies have already started large LP-Gas standby and enrichment projects. These industries, long experienced in the undesirability of peak loading, are projecting their plans for the acquisition of LP-Gas on the basis of uniform monthly purchases and storage for peak load consumption. The quantities they are talking about are very substantial.

The requirements of LP-Gas for synthetic rubber have been large and fairly constant up until very recently. But with the advent of a free natural rubber market, the production of synthetic rubber has declined about 40% and will probably level off somewhat below its present rate. As a result, some increased supplies of butane will become available for other uses. However, the propane formerly used in rubber manufacture in the form of styrene will wind up in the plastic industry to a large extent and cannot be considered as additional available supply.

But in the final analysis, you merchants of butane and propane to the domestic consumer should always be able to compete favorably for the available production of these products if:

1. You can offer the producer a balanced load.

2. You recognize the economic necessity, to the extent it may exist, of accepting the values placed on these products by other industries and users.

John Knox Smith Is Named Field Engineer by LPGA

John Knox Smith, for the last several years safety engineer of the Research and Development Department of Phillips Petroleum Co., Bartlesville, Okla., has been engaged as field engineer for the Liquefied Petroleum Gas Association in its program to aid the industry in matters concerning safety and fire prevention.

A graduate of the University of Texas, with his degree in geology and petroleum engineering, Mr. Smith engaged in field work for the petroleum industry in South America and served nine years on the engineering staff of the city of Austin, Texas.

Before joining the Phillips organization, he served as LP-Gas engineer in the Gas Utilities Division of the Texas Railroad Commission and was loaned to the Army Air Forces to superintend the design and construction of a gas system in West Texas.



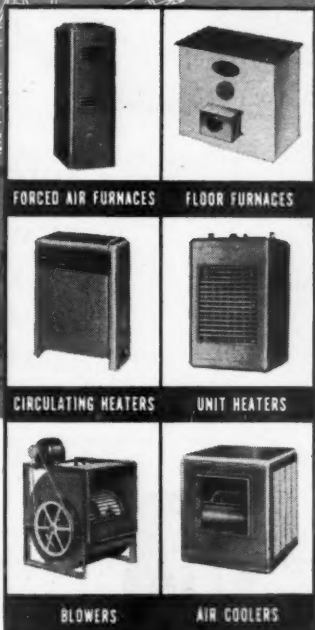
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H. B. McDougal, San Antonio, secretary-treasurer.

NEW PRESIDENT



GUS J. MOOS

OVER 600 members of the liquefied petroleum gas industry gathered in the city of Galveston, Texas, June 9-11, to take part in the second annual convention and trade show of the Texas Butane Dealers Association.



W. J. LAWSON

The three-day program, presented under the able management of Wm. J. Lawson, executive secretary of TBDA, offered much that the dealer could use in the better operation of his business. Numerous social events gave them every opportunity to visit and play as only Texans know how. To put it mildly, TBDA's Second Annual was all and more than any had a right to expect.

The full program of speeches,

demonstrations, displays and social events was divided between the banquet halls and display rooms of Galveston's two beautiful hotels, the Buccaneer and Galvez. So great was the attendance that both hotels held large numbers of conventionites. It hardly need be said that the summer vacation crowd knew that Texas LP-Gas men were in town.

Speakers on the program and their subjects were:

By BOB FARSON

Lyle Blanton—Annual Report.

Russell J. Purner — "Cooperation."

S. M. Apperson—"Duty and Obligation of the Dealer to His Customer."

S. C. McIntosh—"LP-Gas Rules and Regulations of Texas Railroad Commission."

W. E. Fraley—"Fuel Supply and Larger Customer Storage."

Ray Noblitt — "Decency and Courtesy in the Industry."

R. B. Hightower—"Safety Engineering Services Through Insurance Companies."

J. H. Winton—"Dealer Cost of Operation in the Butane Industry."

Voyle Tipton and Carl Bewick—"Training Schools."

H. G. Wendland—"How a Fabricator Views His Responsibilities to a Dealer."

G. M. Kintz—"Safety Practices in the Butane Industry."

One of the most enlightening talks given was that presented by Lyle Blanton, Hereford, Texas, retiring president of the Association. What he said expressed in definite terms what the association stands for and what it has accomplished in the past year. A few of the important ideas he left with his fellow members follow in brief:

"Since the convention in 1946, we have seen the association membership grow from 130 members to almost 300. It shows a confidence in your association and its program.

"During the past 12 months your safety committee has taken the lead in projects to promote safe practices. Perhaps the most outstanding accomplishment of the committee has been the completion of plans for holding safety training schools throughout Texas. As a result of these activities two former butane operators are engaged in holding training courses for employees of the various



Galvez hotel, Galveston, where Texas dealers banqueted and danced.

operators in Texas. These men are Voyle Tipton and Carl Bewick.

"These courses are held in conjunction with the University of Texas. Classes are held on employee level and at completion of a 10-hour course, all who complete it satisfactorily are given a certificate of proficiency by the University of Texas. Every dealer should make immediate application to one of these training schools in his area.

"Other safety projects promoted by the safety committee have been: fire control program held in conjunction with fireman's training school at A. and M. College and the 'magic of fire' demonstrations in about 17 Texas cities last year. Both of these programs were handled by G. M. Kintz and H. F. Browne, of the U.S. Bureau of Mines. Because they were so well received Mr. Kintz and Mr. Browne are on our program again this year.

"Insurance is still one of the sore spots in our industry. Our premium rates are still extremely high. The insurance committee is concerned with this matter and is endeavoring to bring these rates down. As you know, rates are made by the state insurance department and not by the insurance companies. The rates are determined by subtracting the losses from the premiums paid which means

J. H. WINTON



G. M. KINTZ



BRYAN WHITE

New member, executive committee.

that if the losses paid out are excessive in comparison with the premiums paid in there must be an upward adjustment of rates. To bring about a rate reduction we must first reduce our losses. Our safety training program will help us do this."

On the subject of balanced load and winter supply Mr. Blanton said that if the problem of fuel balance between consumer demand and refinery output during the three or four winter months is not solved the industry cannot grow and prosper. He suggested use of larger customer storage as one means. If the industry does not solve this problem some outside group will step in and solve it for us because the customers are going to demand a fuel supply. This could be larger gas companies, major oil companies or even by action of the legislature in setting the industry on an utility basis.

The July issue of Butane-Propane News went to press too soon after the Texas meeting to cover the whole story. More next month!

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Commercial Applications
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DISTRIBUTION OF LP-GAS

Installing and Servicing LP-Gas Systems
Semi-Bulk Systems
Bottled Gas Systems
Gas Utility Service from Central Plants
Multiple Utility Service from a Central
Plant

REGULATIONS

N.B.F.U. Pamphlet No. 58 (1947).
Motor Carrier Regulations
Freight Regulations
Unloading Tank Cars
Marine Regulations

APPENDIX

Products Liability Insurance
Handy Tables for Field Use
The Interchangeability of Other
Fuel Gases with Natural Gases
Flame Weeding
Bibliography
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BUTANE-PROPANE News

1709 West Eighth Street

Los Angeles 14, California

Propane Piped Underground to Storage Plant

By O. D. HALL

A PLAN for fast transport of propane, novel to the Southwest, has been adopted by the R. J. Allison Co., Tulsa, Okla., which is now constructing an underground pipe line from the Mid-Continent Petroleum Corp. refinery in West Tulsa to its bulk plant on the Midco road to carry propane to a 30,000-gallon storage tank which it is erecting on the property. Two 8000-gallon butane storage tanks also are now on the ground at the location. The principal offices are located at 634 So. Cheyenne, Tulsa.

The line has a capacity of 30,000 gallons of propane each 24 hours. The company has contracted for a supply of 3000 gallons per day of LP-Gas to be delivered into its storage tanks. The line is buried from 12 to 18 inches, is constructed of 2½-inch, seamless steel and is about 10,000 feet long.

In order to avoid the risk of obstructing free flow of the propane through the line at any time, the company has installed 3-inch valves in the line and in the pumping plant. Seven Nordstrom valves have been installed in the pipe line and 14 valves of the same make are connected to the manifolded pumping and distributing system in the pump house.

These valves not only control the input and output of the propane flow line but also the handling of butane which will be brought in by rail or transport trucks for storage in two 8000-gallon butane tanks which are on the site, or for mixing.

"This valve system can handle 18 or 20 different operations connected with the input, output and mixing of LP-Gas," said Mr. Allison.

In addition to the 3000 gallons per day delivery of propane contracted by the Allison firm from the Mid-Continent refinery, the pumping and distribution system will unload, load, transfer or mix large quantities of normal butane which will be brought to the Allison bulk plant in tank cars or transports, some of which will be mixed in various proportions with propane at the plant. The valve system will give the plant operator exact control of the various mixing and transferring processes as well as of the input and output operations, Mr. Allison says.

Mr. Allison expects to have this line in operation between September 1 and September 15. He says that the entire output in the line has been contracted and sold. The gas delivered through the line will be sold wholesale at the tanks to dealers who come and get it.

The R. J. Allison Co. is a wholesaler and transporter of butane and propane. It also owns the Tulsa Tank Car Corp. which manufactures, repairs and rebuilds butane and propane tanks. In addition, Mr. Allison has LP-Gas bulk plants in Oklahoma at Duncan and Mayesville from which he operates tank trucks, and bulk propane storage plants at Great Bend, Stockton and Reserve in Kansas. He also is a stockholder in Standards Fuels & Appliances, Inc., of Tulsa.

The Allison firm in its operations specializes in selling LP-Gas for industrial uses in the oil and gas fields of Oklahoma, Nebraska, Kansas, Texas and New Mexico. It maintains 50 skid-tanks for rental in the oil fields. These can easily be moved from well to well as sources of fuel for drilling and pumping as operating conditions may require.

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The manifold system is installed under the floor of the pumping station and the various valves are to be distinguishable as to their functions by painting them in colors, each color to be indicated by a "key" chart which will be posted on a wall of the station.

A Viking 90-gallons-per-minute ca-

capacity pump, equipped with an explosion-proof motor has been installed in the plant and the whole installation has been air-tested and found to be in good operating condition. It may be necessary later on to enlarge the pumping capacity if additional supplies of LP-Gas are contracted, Mr. Allison says.

Dealers Warned Against Using Anhydrous Ammonia in LP-Gas Tanks

THE first bulletin issued to the LP-Gas industry by John Knox Smith, new safety and field engineer of the LPGA, contains a warning against the use of anhydrous ammonia in the same tanks which are used for butane or propane. His bulletin follows:

"Due to certain war-born technical advances, anhydrous ammonia has been found to be a fertilizer which is easily made and easily applied. Anhydrous ammonia is transported and used as a liquid, and must be handled under pressure because of its low boiling point (minus 28° F.) In this respect, it should be handled in type 200 containers.

"Because of the availability of such containers in the LP-Gas industry, some LP-Gas distributors have started distributing anhydrous ammonia through their equipment. It has been the practice of the LP-Gas industry to use brass valves and fittings on all types of equipment.

"In its pure form, anhydrous ammonia will not attack brass, but com-

mercial grade specifications allow a slight amount of water as a contaminant. It is this slight contaminant that causes the ammonia to attack brass. Even if the anhydrous ammonia were 100% pure, there is always the chance of some moisture in any residual LP-Gas that might be left in any tank in which ammonia may be placed.

"The attacking of brass is apparently in the worst possible manner. There is no discoloration or eating away of the brass, but an embrittlement process ensues which causes the brass fitting to come apart after exposure to the anhydrous ammonia.

"This Bulletin is sent to you as a warning not to use any anhydrous ammonia in your present LP-Gas equipment. Should you wish to distribute anhydrous ammonia, use separate and special equipment which has been designed for such service by the manufacturer.

"You should also warn your customers, especially your flame cultivation customers, of the danger of the use of anhydrous ammonia in their present LP-Gas equipment."

Safety

In Motor Truck Operation

It's Improving

SAFETY in the operation of trucks handling liquefied petroleum gas is improving!

Such is the conclusion that can be drawn from a report of the Bureau of Motor Carriers of the Interstate Commerce Commission, entitled "Motor Carrier Fire Accidents in 1945."

Facts which are set out in this report have been analyzed by Frank R. Fetherston, vice president, Technical Division, Liquefied Petroleum Gas Association, in a recently published bulletin and its importance to the industry prompts this publication.

"This report," states Mr. Fetherston, "includes a mass of statistical data covering all classes of transportation. While the products of our industry are not referred to specifically, they are included in general classifications that permit analysis to a limited degree."

"From these data certain conclusions can be drawn with respect to relative improvement in safety of motor truck operations. The trend is certainly toward safer transportation."

"Noted below are a number of recommendations which are drawn from this report and which have been edited to apply to the LP-Gas industry."

"1. Because of the severity of fire accidents directly or indirectly attributable to mechanical defects, it is apparent that there should be better inspection and maintenance of motor vehicles. This is without regard to the fact that the number of accidents, generally, could thus be reduced."

"The majority of mechanical defects causative of accidents are relatively minor in character, readily susceptible of cure by better attention to detail. It is hoped that the effect of this recommendation will not be lessened because of constant repetition by many safety organizations, for it is amply warranted by the facts."

Watch Synthetic Tires

"2. Both the number and percentage of fires directly attributable to tires is relatively small. However, such fires are nearly always stubborn to extinguish and frequently result in property damage. Care should be exercised during the period of readjustment following the war not to overlook every precaution with respect to tires, particularly as regard dangers inherent in overloading and high speed operation, more particularly in the case of synthetic tires."

"3. Whatever steps can be taken to prevent the stoppage of vehicles on highways will contribute, in large measure, to the decrease in number of accidents, particularly collisions, in which so large a proportion of the fires reported originate. Too frequent-

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ly, in addition to not meeting this recommendation, vehicles are ill protected by improperly placed emergency signals, by the failure to set them out at all, or by failure to set them out sufficiently quickly after the occurrence of some accident causing stoppage. This is a matter of driver training. These matters should be brought to the attention of all drivers.

"4. The relatively much greater severity of fire accidents, as regards fatalities, injuries, and property damage in cases in which motor fuel spillage is a factor, indicates the need for the prevention of the spillage of fuel or leakage of cargo by all practical means.

"5. Fires of the 'fire only' type constituted a greater percentage in 1945 than in the entire period since 1940; although fires of this type are nearly half of those in which property-carrying vehicles are involved. Smoking should be prohibited.

Stress Precaution

"6. The 1945 fire data show a relatively few number of fire accidents involving vehicles laden with highly hazardous loadings, even though the consequences had been very grave in the relatively few number of fires of this character. The relative good experience, considering the high potential hazard involved, is probably an index of that greater amount of precaution which is warranted. That degree of such care and attention, both as regards driver selection and training and mechanical care warranted by the extra hazard, should continue to be stressed.

"7. In many cases involving vehicles 'running off the road' and in collision accidents, likewise, reports from the motor carriers have indicated too long hours of service. In some instances

drivers have been fatigued to the extent of falling asleep at the wheel, and in others, drivers have been so fatigued as not to have their full alertness.

"While it has been alleged, probably with some justification, that the driver shortage necessitated the employment of drivers in hours of service in excess of those prescribed by the Commission's regulations during the war, there is not the excuse at the present time as might have existed formerly. No reason now appears why drivers should not strictly conform to the requirements in the hours of service regulations of ICC. There should be a greater degree of responsibility to ascertain that drivers are in fit condition to commence their duties and no driver who is ill or fatigued or in otherwise unfit condition to drive should be allowed to drive.

"8. Better attention should be given to the maintenance of engine exhaust systems from the standpoint of causing fire directly. When exhaust parts are replaced, they should be inspected originally, and again after a short period of days of running to assure their gas-tightness.

"9. Some of the fires reported have been traceable to 'poor housekeeping.' Accumulations of grease on underbodies and on engines and in engine compartments have been contributory to or causative of fires. Accumulations such as these should be prevented.

"10. To recapitulate: As a matter of course, all means should be taken to prevent accidents occurring. On the other hand, the results of fire accidents are so disproportionately grave that every practical means should be taken to prevent the occurrence of fires either in connection with or as the sole cause of accidents. **SAFETY ALWAYS SHOULD BE THE FIRST CONSIDERATION."**

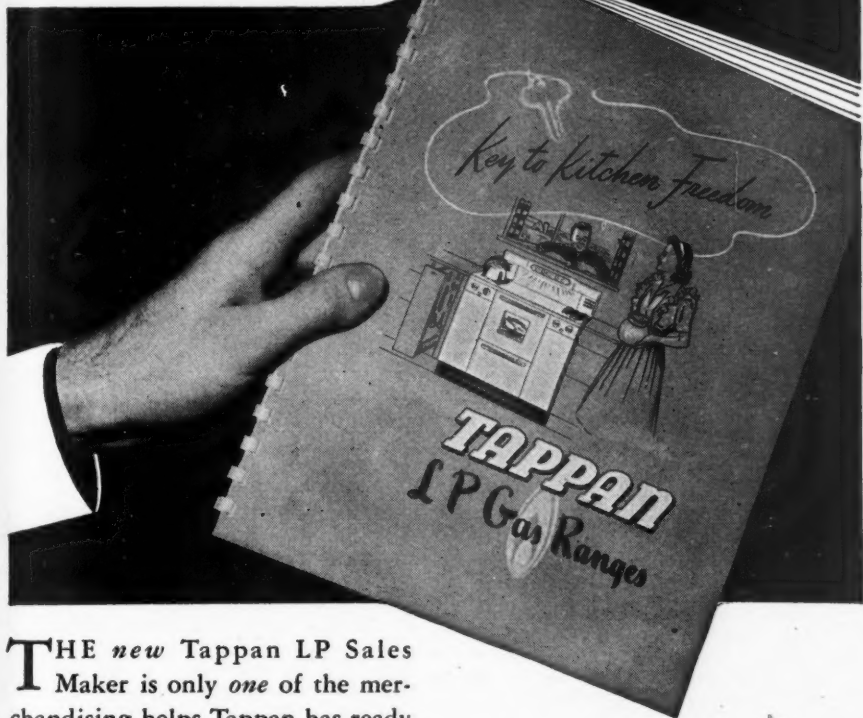
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LP

SALES MAKER

"...most valuable sales tool
in the trade."

TAPPAN LP DEALER



THE new Tappan LP Sales Maker is only *one* of the merchandising helps Tappan has ready for its LP dealers. There are seasonal promotions, complete window and floor displays, highway poster and window card, newspaper mats, billboard posters, sales

training and sales demonstration outfits. Every piece is geared to bring in LP prospects and help you sell one of the world's finest gas ranges.

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For 66 years, makers of fine ranges

HERE ARE YOUR ANSWERS

PARTIAL LIST OF CONTENTS

WHAT IS PROPANE?—Supply. Properties. Definitions.

THE BEHAVIOR OF GASES—Pressure. Specific Gravity. Density. Compression.

HEAT AND TEMPERATURE—Heat Transfer. Conduction. Convection. Radiation. Expansion.

WHAT GOES ON IN A PROPANE CYLINDER? Construction. Filling.

THE SIMPLE REGULATOR—Design. Problems and Cures.

REGULATOR MANIFOLDS—Service Problems. Multiple Installations. Various Manifold Systems.

REGULATIONS — Equipment Selection and Installation. Domestic. Industrial. Safety.

LP-GAS PIPE LINES—Friction. Sizes. Formulas. Charts.

TESTING FOR LEAKS AND ADJUSTING BURNERS—Flame Characteristics. Servicing.

FUNDAMENTALS OF THERMOSTATS—Types. Service. Expansion of matter under heat.

PILOTS AND PILOT CONTROLS — Types. Causes of Failure. Proper Location. Adjustment. Safety Pilots.

BURNER DESIGN AND APPLICATION — Ports. Orifices. Burner Installation.

APPLIANCE CONVERSIONS—Inputs for Domestic, Commercial and Industrial Burners. Required Information.

FACTS ABOUT WATER AND WATER HEATERS—The Effects of Water on Heaters. Usage Tables.

TYPES OF WATER HEATERS—Installation. Safety Devices. Efficiency.

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QUIZ

Space Heating—Number 4

• This department is a monthly feature to stimulate thought and to give operators basic industry facts. Clip out for your notebook or file in a standard, 3-ring, loose-leaf binder. Sources of information: The Bottled Gas Manual, Handbook Butane-Propane Gases.

Questions

Answers

1

What is a floor furnace?

A floor furnace is a heating unit consisting of a vented fire box set into a casing so arranged that the cool air from the floor level flows over the heating element, is warmed, and rises through a floor register into the room.

2

Can floor furnaces be operated on automatic control?

Floor furnaces lend themselves to automatic control and are equipped with pilot lights and thermostatic control.

3

Is there any connection between the combustion chamber and the air being warmed?

All air for combustion is obtained from outside of the room and the products of combustion are vented to the outside, resulting in heat similar to that obtained from a central warm air system.

4

Are floor furnaces safe and satisfactory for use with LP-Gases?

Properly installed, the floor furnace is a safe and satisfactory heating unit, and many thousands are in service.

5

What is a wall heater?

Wall heaters are of several types, including the vented and unvented radiant section units and the vented flame enclosed tubular units.

6

What is the usual use of this type of heater?

It is used for heating small rooms, such as bath rooms, where radiant heat is desirable.

7

What is a circulating heater?

Circulating heaters are console type heaters that can be placed in a room after a building has been built. There are forced air circulating types, combination radiant and gravity circulation, vented and unvented.

8

What is a radiant heater?

A radiant heater is one in which the heat from the flame and products of combustion are directed over a refractory material that becomes incandescent and radiates the heat into the room.

9

What is an overhead spot heater?

An overhead spot heater is set under the ceiling and the heat from the burning gas is transferred from the combustion chamber to the air forced around it by a fan and directed to the point of use. These heaters are used generally in places of business or factories.

10

What general precaution should be taken on the installation of any gas heating unit that takes the air for combustion from the room?

Provision should be made for fixed ventilation to renew the air as the fuel uses up the oxygen in the atmosphere.

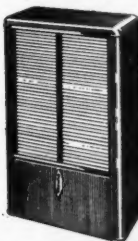
NEXT MONTH: Tools for Your Kit.



Yes - Gas Fired **REZNOR** HEATERS

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Floor models or suspended type Reznor gas heaters economically provide heating comfort for offices, factories, and commercial establishments. Easy to install, low maintenance, and less operating trouble make these heaters first choice for occupants and property owners. We will gladly send you literature, write today.



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NO BOILERS • NO STEAM LINES
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Selling Propane in the Colorado Mountains

By M. A. HORNE.

EIGHTEEN months ago is a long time to sign up for a new business and finally have it catch up with you now, but that is what has happened to C. B. Rader, of Glenwood Springs, Colo.

Mr. Rader says he is in this business of bottled gas (along with that of a Ford agency) because his friend, Harry Torbit, treasurer of the National Butane-Propane Association, tried for the last five years to get him into it. Mr. Torbit told him he would make more money in propane than he ever made on cars and by the rate the new Fords are not being delivered to Mr. Rader, it may be doubly so.

Anyway, Mr. Rader has gone into the bulk and retail propane business after careful study and with a cheerful eye on the benefit to the public that he has served many years.

Has 18,000-Gal. Storage

He has put in an 18,000-gallon storage tank, using Phillips propane, outside of Glenwood Springs, and expects to add another tank as soon as he can get one shipped to him. From this bulk plant his right hand man, G. E. Gellinger, formerly of Texas, and a man who knows his propane bulk business, dispenses LP-Gas to local dealers and customers in a handy truck of 1500 gallons capacity. Only propane is sold.

Mr. Rader is very much encouraged with the tremendous amount of bulk business that has recently opened up. The new Government shale plant at Rifle, Colo., uses it in the laboratory. Ten miles west of Rifle (which is about 26 miles west of Glenwood Springs) is Coal Basin where there is a coke oven that takes 1500 gal-

lons a day. Numerous dude ranches up the Frying Pan region take anywhere from 500 to 2000 gallons weekly.

At De Beque, Colo., they have been using propane gas in an oil drilling rig. Seventeen miles up Roan Creek they have just brought in a new oil well. That all means future customers for Mr. Rader.

When asked what methods he employs to promote and instruct a public formerly unused to bottled gas, he laughed.

"Haven't had a bit of trouble," he said. "Cottage camps and dude ranches and businesses are just eating it up. All I have to do is to get the appliances here. They sell themselves. Of course, in the early summer, we plan to have a cooking school using all new bottled gas equipment. Glenwood Springs has never had one and it ought to be a honey."

Mr. Rader uses the Torbit system of loaning bottles, with no deposit, thus retaining ownership of both bottles and regulators. It is his theory that customers figure a deposit gives them ownership to the bottles and can therefore take them off with them. The deposit in no way pays for the bottle and it makes the customer unhappy. Mr. Rader also offers local dealers bottles on the same basis.

"No, it won't take long to get the Western Slope of Colorado fully propane-gas conscious," concludes Mr. Rader. "Just show them the equipment, is all you need to do. It's a real coming business even if it did take a while to get to me in Glenwood Springs."

PLUMBERS FURNACE

★ IN TWO SIZES



Here is the Ransome Plumbers Furnace with a 5-gallon I.C.C. tank which permits 34 hours of continuous operation at full flame without refilling. This model is particularly adaptable for shops and garages where the unit is not moved around a great deal. Where portability is more of a factor, the furnace may be had with a 2½-gallon tank which gives 17 hours operation at full flame. Operates on either Butane or Propane, burner is non-clogging, soldering iron shield is removable. Recommended for melting lead, babbitt, glue, paraffine, asphalt, and for heating soldering irons. Write for further details and prices.

RANSOME COMPANY

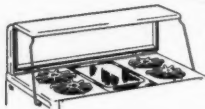
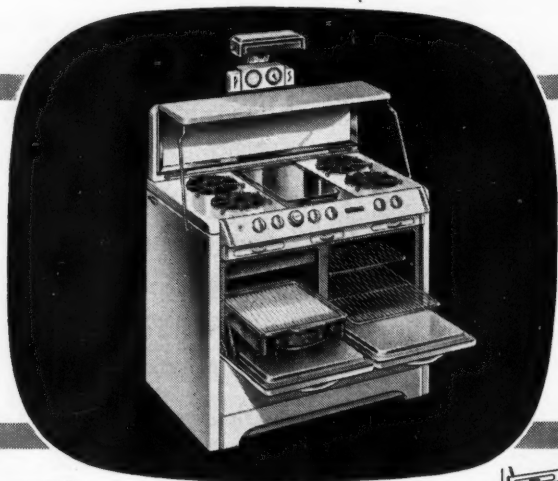
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Ransome

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O'Keefe & Merritt
Gas Range

designed for your profit



VANISHING SHELF...
 Handy, *step-saving* utility shelf that really vanishes when not in use!



KOOL-KONTROL PANEL
 Keeps top-burner gas cocks always cool. They never overheat!



GRILLEVATOR BROILER
 Visible, fast, finger-tip control makes broiling easier than frying.

ANY WAY you look at it—design, exclusive features, performance or customer preference—the O'Keefe & Merritt Gas Range is the line to sell. For more than a Quarter Century, wherever they

are sold, O'Keefe & Merritt Gas Ranges have been the choice of women who take pride in their cooking.

O'KEEFE & MERRITT CO.
 3700 East Olympic Blvd., Los Angeles 23, Calif.

BUTANE-PROPANE News

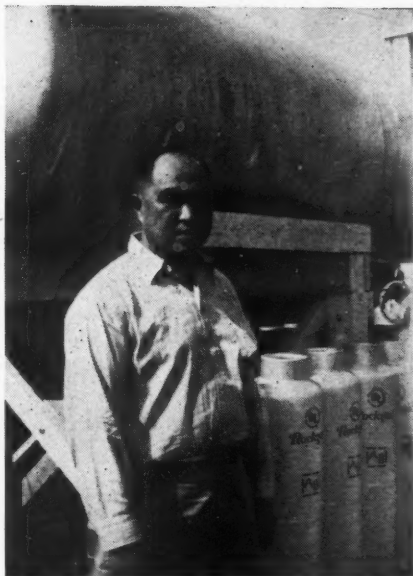
Philippine Distributor Advertises by Radio

THE Inter-Island Gas Service, Inc., LP-Gas operators in the Philippine Islands have moved recently from Cebu City to Quezon City, according to Andres Borromeo, manager of the firm.

Their storage tank, of 2040 gals. capacity, was first installed in Cebu where the company was located during the Japanese invasion and occupation and the subsequent liberation of the Islands by the American armed forces.

As seen in the illustration, the company has hundreds of Rockgas carrier and service tanks together with the large storage tank and refilling plant.

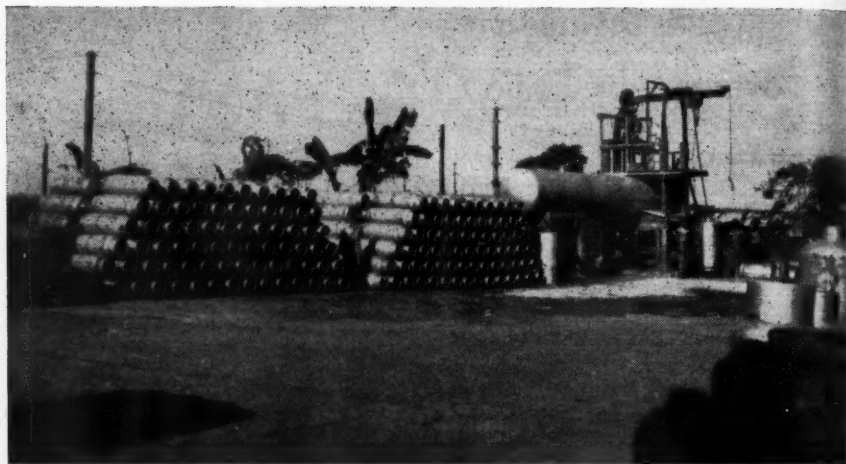
Inter-Island advertising has spread from the newspaper medium to that of radio. A weekly broadcast called



Andres Borromeo, manager of Inter-Island Gas Service, beside storage tank and cylinders.



Bulk plant and employees of Inter-Island Gas Service in the Philippines.



Bulk and cylinder filling plant of Inter-Island Gas Service, Inc., in Philippine Islands.

"Rockgas Club Program" has been presented since the first of the year. It is on the air every Wednesday from 12:30 to 12:45 p. m. (Manila time) over station KZPI, 800 kilocycles long wave, and 9710 kilocycles short wave at 21 meter band. The company is also sponsoring many athletic events such as the Manila soccer football league and exhibition tennis matches by the Philippine Davis Cup tennis players.

The Inter-Island Gas Co. has recently obtained a contract to supply "Rockgas" to 100 dwelling units occupied by officials of the U. S. Department of State in Manila and other U. S. Government Rehabilitation Agencies in the Philippines.

Another new commission of this firm has been to make about 20 installations of "Rockgas" at the official residences in Baguio for the Cabinet Secretaries of the

Philippine Republic. "Magic Chef" ranges will be used in each of these residences.

According to Mr. Borromeo, the future is bright, as distribution extends all over the Philippines, to many points in China and other Far East countries. He gives liberal credit for his success to A. N. Kerr, Robert G. Hardie and Philip Koch, all of the Imperial Gas Co., Los Angeles, from whom fuel is purchased.

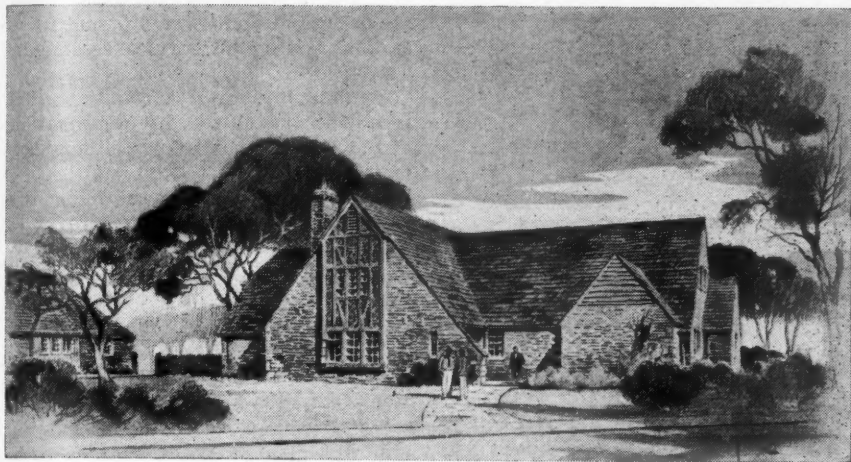
Butane for Tourist Cottages in Texas State Park

The Texas State Park Board has given its approval for an installation of butane gas systems to serve tourist cottages at the 36 Division State Park.

The systems will serve 16 cabins in the park which are rented to vacationists and fishermen. They are at present equipped with gasoline stoves.

Boys Town

FATHER FLANAGAN SEES
THE REALIZATION OF
A THIRTY-YEAR DREAM



Buildings, living quarters completely Bryant Winter Air-Conditioned



A dream that began thirty years ago with a young priest and five homeless boys is nearing reality with the construction of a three-million-dollar addition at Boys Town, ten miles from Omaha, Nebraska.

When completed, Father Flanagan's Boys Town will be able to provide accommodations for one thousand boys, more than twice the number now being cared for. The new addition includes twenty-five cottages of the type shown in the illustration above, each of which will house twenty boys of high school age; a grade school and a high school, both completely equipped with motion picture apparatus for visual education; a fully-equipped trade school; a field house, athletic fields and swimming pool; an administration building and all other facilities necessary to the proper care of destitute boys of every race and creed.

Besides these living and educational facilities, Boys Town's nine hundred acres include great farm lands and its own herds of dairy and feeder cattle, as well as sixty acres of vegetable gardens. Here farm and dairy training are provided for boys who are so inclined.

All buildings and living quarters at Boys Town are equipped with Bryant BA-88 Winter Air Conditioners. The BA-88 is made in seven sizes with outputs up to 200,000 BTU per hour. Bryant Heater Company, 17825 St. Clair Avenue, Cleveland 10, Ohio . . . *One of the Dresser Industries.*

bryant
GAS
HEATING

LET THE PUP BE FURNACE MAN



Wyoming Dealers Organize Association

WYOMING is the latest state to form an association for the benefit of its liquefied petroleum gas dealers.

The formal organization occurred on June 4 in Casper, Wyo., and resulted in the election of Ira A. Lamb, Wyoming Gas Service, Lusk, to the presidency. W. O. Ole-son, Big Horn Butane-Propane Gas Appliance Co., Worland, Wyo., was elected vice president; Geo. W. Horworth, Healy & Horworth Inc., Gas Co., Buffalo, was named treasurer and Rae Doman, Butane-Propane Gas Service, Casper, was elected secretary.

Two weeks before the final meeting,

about 40 butane and propane distributors, mostly from Wyoming, and with a complimentary attendance from Montana and South Dakota, met for a two-day sales and service session in Casper.

This was on May 16-17 and resulted in a definite step for the organization of the state association which now has materialized.

The May program was under the supervision and direction of Harry J. Porter, consulting LP-Gas engineer, of Kansas City, Mo. Matters of operating importance, including the type of bulk storage, transport, and adequacy and efficiency of domestic customer storage, the competitive relation of LP-Gas to other fuels, etc., were discussed in detail under the able direction of Mr. Porter, who, in conjunction with D. L. Harlow, vice president of Universal Petroleum Co. and Unigas Corp., of Casper, and



IRA A. LAMB



Group that attended one of luncheon meetings of Wyoming LP-Gas distributors, Casper, May 16-17.—Photo Courtesy, D. L. Harlow, Universal Petroleum Co., Casper.

EFFICIENT

CLIMAX

SAFE!

CONTINENTAL CONTROL HEAD ASSEMBLY

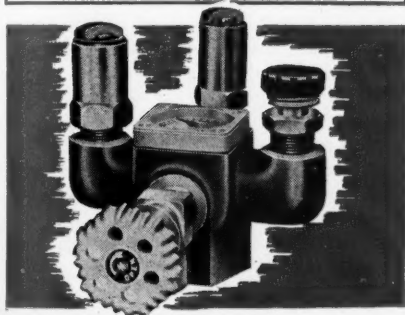
applicable to above or below ground systems

Proven and accepted by L.P.G. Industry. Built to comply with the published requirements of the National Fire Underwriters' Board.

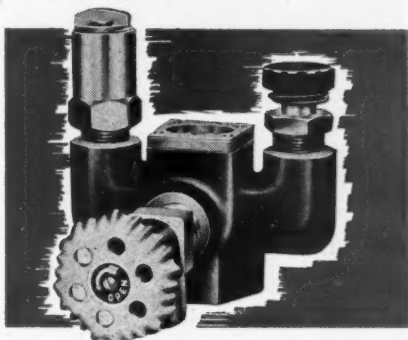
FOR TWO RISER INSTALLATIONS

Complete head, factory tested and assembled, includes following major parts:

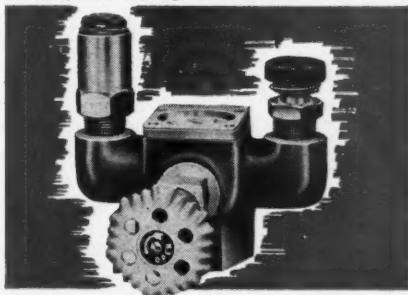
- Vapor Return Valve with Slug Check
- Line Shut-off Valve with Slug Check
- Magnetic Float Gauge or Slip Tube Gauge
- Pressure Gauge—optional (special tapping necessary)
- Safety Relief Valve
- Pigtail
- Expansion Coil
- Pressure Reducing Regulator
- Filler Valve for Second Riser (separate)



MODEL 251. Will accommodate senior float type liquid level gauge. $\frac{1}{2}$ " openings accommodates two relief valves, line valve, vapor return, adaptable to $\frac{1}{2}$ " tank riser.



MODEL 250. Will accommodate senior float type liquid level gauge. $\frac{3}{4}$ " openings accommodates vapor return valve, relief valve, line valve, adaptable to $\frac{1}{2}$ " tank riser.



MODEL 252. Will accommodate junior size float type liquid level gauge. $\frac{3}{4}$ " openings accommodates vapor return valve, relief valve, line valve, adaptable to $\frac{1}{2}$ " tank riser.

C LIMAX Control Heads are precision built for extra strength and safety. All machined parts are cleanly cut. Bodies are bronze castings, close grained, free of burrs. All models come with or without fittings. Available in other combinations of valves than illustrated, so as to be adaptable to all service requirements. Write for literature and detailed specifications.



CLIMAX INDUSTRIES, INC.
L. P. G. DIVISION

15 North Cincinnati Avenue
TULSA, OKLAHOMA



Bulk plant of Wyoming Gas Service, Lusk, Wyo., owned by Ira A. Lamb, newly elected president of Wyoming dealer group.

"spark-plug" of the meeting, contrived to make operators of the "great open spaces" service-conscious.

Sales promotion problems were presented by Keith Clevenger, sales promotion and advertising manager of Southern Gas & Equipment Co., Tulsa, who, in company with L. E. Bowen, vice president and general manager of the latter company, had been invited to attend the meeting.

Comparing the present situation of the LP-Gas distributors to earlier experiences of the natural gas industry, with which he has been familiar for many years, Mr. Clevenger said: "You are in the gas service business. Your present position is not something new, except possibly to you. Natural gas utility and pipe line operators faced the same problems 20 years ago. As long as they, and you, merely provided gas for cooking, water heating, refrigeration, and similar light duty services, it was comparatively easy going. But when they, and you, embarked in the house heating service, with all its degree-day problems, they, and you, were in a truly public service business. You must measure up to

your recently acquired responsibilities or give way to those who can, and will."

Mr. Clevenger then outlined a sales promotion and advertising program, lately developed and offered by his company as an aid to local LP-Gas distributors in educating themselves and their customers in the most economic and efficient use of this new gas service, with the statement:

At the height of the sales and service discussion, the problem of how Wyoming operators might best advance their interests kept "popping up." Finally, Dan O. Mecklenberg, secretary of the Montana LP-Gas Association, told them how Montana had worried with the same problems, and had very largely solved them by organization of a state association. The result was the appointment of Ira Lamb, president of Wyoming Gas Service, of Lusk, as chairman of an organization committee composed of the following members: W. O. Ole-son, Big Horn Butane-Propane Gas Co., Worland; George W. Howorth, Healy & Howorth, Inc., Buffalo; N. C. Whittington, Cody; and Russell Beckwith, Landar.

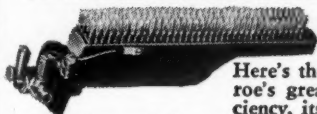
YOU'LL BE AHEAD AND STAY AHEAD WITH MONROE



Built with FEATURES That Assure You of a Profitable FUTURE!

Monroe—a truly outstanding gas heater that's scientifically designed and ruggedly built to do an efficient, economical heating job *anywhere!* Packed with modern automatic features, beautifully styled and equipped with the famous GASTMASTER BURNER—the "tailor-made" burner specially engineered and designed for each type of gas—natural, mixed or LPG. If you want to get ahead and stay ahead—remember the name MONROE. It's the name you'll find on America's finest-looking, fastest-selling gas heaters. *Some exclusive franchises available.*

FAMOUS GASTMASTER BURNER



Here's the secret of Monroe's greater heating efficiency, its silent, odorless operation and its lower gas consumption. The Gastmaster Burner is ruggedly built for years of trouble-free operation and engineered to operate economically on *all* gases.

Nationally Advertised

Monroe

One of America's Finest Line of

GAS HEATERS

MONROE STOVE CO. • 3256 MILWAUKEE AVENUE • CHICAGO 18, ILLINOIS

THESE OUTSTANDING MONROE
FEATURES WILL HELP YOU
CLINCH MORE GAS HEATER

Sales!

- **Dual Heat Exchangers**—Twin heat exchangers squeeze all the heat from the air as it moves toward the flue.
- **Patented Interior**—Circulates clean, fresh-heated air evenly throughout the home.
- **Automatic Lighting**—Safe and convenient. Use only one match a season!
- **Warm-Flor Radiants**—Scientifically designed to produce more infra-red heat and project it farther.

MONROE OFFERS YOU A
COMPLETE LINE FOR
EVERY HEATING NEED
WITH ALL GASES

Model Homes Show Features LP-Gas

AS a means of attracting interest of people living beyond the natural gas mains, management of the Model Homes Show in Tulsa, Okla., included exhibits of liquefied petroleum gas appliances and installations along with natural gas, electric appliances and household furnishings.

The seven model homes were constructed on a single site on South Sandusky Ave. They were opened May 15, for public inspection with the idea of ultimate sale at prices ranging from \$10,000 to \$21,500 and are in an area served with natural gas by the Oklahoma Natural Gas Co. However officials of that company encouraged the LP-Gas installations and exhibits. The show ran until June 15.

Natural gas utilities and dealers in natural gas appliances and equipment recognize that some areas now outside city limits and served with LP-Gas, eventually will come within reach of natural gas lines. The familiarity of such customers with LP-Gas utilization has sold them on the advantages of gas as a fuel and as a convenience for better living and will make them better customers of natural gas utilities if their sections are brought into the city limits.

Also many city dwellers already have or wish to own homes in the country and will be interested in LP-Gas service. Therefore, management of the Model Homes Show saw the advantage of permitting a limited number of LP-Gas exhibits on the grounds as a means of attracting more people to the show.

The only LP-Gas kitchen installation was made in the garage of one of the new homes by Tulsa Skelgas Service. This display included an all-Skelgas custom built kitchen with

steel cabinets, sink, refrigerator, range and water heater.

In one corner was a twin-cylinders installation and on the lot at the rear of the garage was a 500-gallon customer storage tank.

Back of one of the model homes an aluminum sheathed trailercoach was parked in the center of an attractive lawn. The model on exhibit was equipped to utilize LP-Gas stored in bottles at the front of the trailer and connected by copper piping to a four-burner gas range, with oven, and to a small space heater.

In the backyard of another model home is a garbage and trash burning appliance which can utilize either LP-Gas or natural gas. Its manufacturers and distributors state that it will reduce trash, including bottles and tin cans, to ashes within 30 minutes. The ashes drop into a 15-foot deep pit beneath the burner. The burner can be operated from two to three years without cleaning out the pit it is claimed, and the cleaning service is included in the sales agreement.

Littlefield, Texas, Dealer Specializes in Pumping

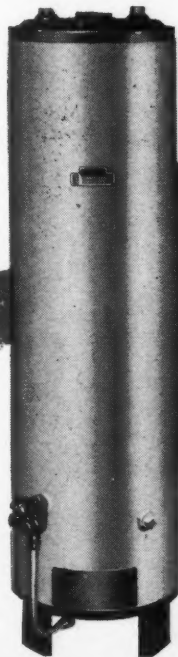
Charles Heathman has recently opened a new butane-propane gas and appliance business in Littlefield, Texas.

Mr. Heathman, while serving domestic accounts, will specialize in serving customers who are using LP-Gas for irrigation pumping. His floor stock will include ranges, heaters, water heaters, floor furnaces, engines, pumps, carburetors and other automotive equipment.



Twenty-four hour hot water service is what your customers expect. For 25 years United States Heaters have been built to fulfill their highest expectations.

Precision built, snap-action dial control thermostats keep the temperature HOT. Dependable safety pilot controls keep the flow of gas SAFE. Heavy gauge, corrosion protected tanks make the heater LAST for YEARS. Thick, snugly fitting blanket of Fiberglass insulation keeps the heater ECONOMICAL. Infra-red fired glossy enamel keeps the heater BEAUTIFUL.



Low prices and a wide range of sizes make the United States Heater line attractive to Dealers and Consumers alike. Write for latest catalog.

Hot Water Heating satisfaction begins when the United States Heater is installed. This satisfaction builds for the dealer a continuous profitable business that goes far beyond the original water heater sale.

U S H

MFD. BY UNITED STATES HEATER CO.
COMPTON, CALIF., U.S.A. REG. U.S. PAT. OFF.

UNITED STATES HEATER CO.

133 EAST PALMER AVENUE

COMPTON, CALIFORNIA

Maine Dealer's Average Customer Uses 1300 lbs. LP-Gas Annually

ONE of the furthest outposts of propane gas service in the Northeastern section of the United States is that of the Northeastern Supply Co. of Caribou, Maine, distributors for Utilities Philgas service and gas appliances, and dealers in oxygen and acetylene welding and cutting gases.

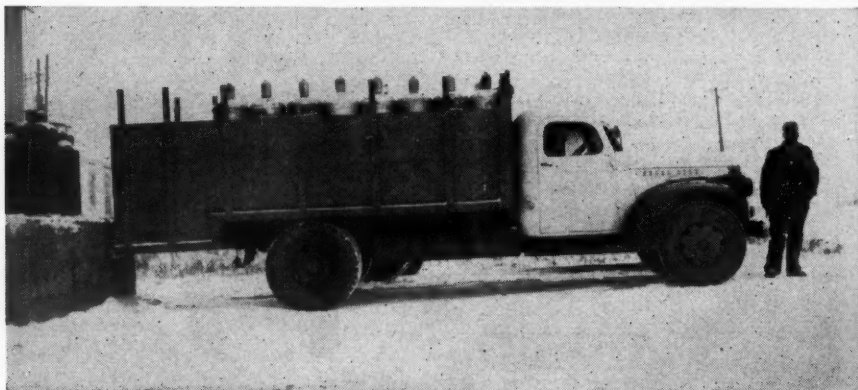
The persistent but steady growth of this operation under the ownership of Alfred C. Thomas is at once an indication of the determination of dealers as well as the amazing potentialities for expansion inherent in the propane business.

Historically, the Northeastern Supply Co. dates only from 1935 when Mr. Thomas, by his own confession, set up operation with equipment consisting of a borrowed car, \$500 borrowed capital and a small box trailer which would handle three cylinders

of gas. During this year only three customers were signed up.

By the end of 1938 the trailer was inadequate for the delivery service and a second-hand pickup truck was acquired. Another and larger truck was purchased in 1940, and the company then began hauling gas from a bulk station in Bangor, a distance of 175 miles from Caribou. The present fleet consists of three service trucks and a transportation truck, the latter handling 65 100-lb. cylinders to a load.

At the end of 1946, Northeastern Supply Co. had approximately 300 customers, with a total propane consumption for the year of over 400,000 lbs. The unusually high per customer consumption of over 1300 lbs. per year is explained by the fact that over 40 of the accounts are commercials or small industrials spread



Northeastern Supply Co. cylinder truck and Carlton Miller, driver. Operating regularly with a load of 25 cylinders, this truck travels from either Bangor or Portland, Maine, to Caribou, 175 miles and 200 miles, respectively.

LEAK PROOF SECURITY *and* **TiteSeal**

THE INDESTRUCTIBLE GASKET
AND PIPE-JOINT SEALING COMPOUND

**Mean The Same Thing
In The LP-Gas Industry**

TiteSeal, the indestructible gasket and joint-sealing compound, is especially compounded for use on butane, propane and other LP gases, on installations above and below the ground, and wherever the LP industry must have absolute LEAK-PROOF SECURITY.

PLEASE NOTE TOO, THAT YOU CAN OBTAIN YOUR REQUIREMENTS OF TITSEAL FROM ANY OF THE BETTER WHOLESALERS OF PLUMBING, HEATING SUPPLIES, AND EQUIPMENT.



THE L-P GAS INDUSTRY IS TiteSeal BOUND



RADIATOR SPECIALTY COMPANY

CHARLOTTE 1, NORTH CAROLINA

- RADIATOR SPECIALTY COMPANY OF CANADA, LTD. TORONTO
- GOLDEN STATE RUBBER MILLS, LOS ANGELES, CALIFORNIA

over the territory 70 miles long and 50 miles wide, which Mr. Thomas services out of Caribou. Among these high usage accounts he lists the following: 21 restaurants, 7 hotels, 1 hospital, 5 convents, 5 schools, 2 tire repairing plants and 2 cleaning establishments.

One of the restaurants, which serves approximately 2000 meals per day, has an eight-cylinder hookup and uses approximately 45 cylinders per month. Another, serving from 1000 to 1500 meals per day, uses 40 cylinders per month. The hotels vary from 12 or 15 cylinders up to 160 per year.

Among the industrial users is a tire recapping station, operating twin vulcanizing molds for repairing tires. Another is a local publishing company that uses gas under its lead melting pots.

As of the end of 1946, the Northeastern Supply Co. reported that it had increased its new customers by approximately 60 during the year.

CALENDAR

Aug. 27 — Illinois LP-Gas Association. Peoria.

Sept. 3-5—University of Tulsa LP-Gas Short Course. Tulsa, Okla.

Sept. 8-10—Southwestern LP-Gas Convention and Appliance Show (Oklahoma LPGAs). Skirvin Hotel. Oklahoma City, Okla.

Sept. 15-17—National Butane-Propane Association Convention and Exhibits. Jefferson Hotel. St. Louis, Mo.

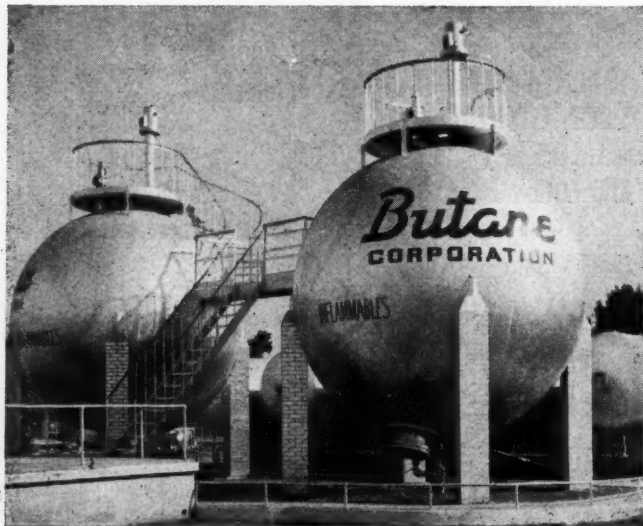
Oct. 6-8—American Gas Association Annual Convention. Cleveland.

Oct. 9-10—Missouri LP-Gas Association. Jefferson City, Mo.

Oct. 10—California Natural Gasoline Association. Fall Meeting. Ambassador Hotel. Los Angeles.

Oct. 20-21—Kansas Liquefied Petroleum Gas Association. Hotel Broadview. Wichita.

Dec. 3—Wisconsin Liquefied Petroleum Gas Association. Annual Meeting.



Butane Corp., Phoenix, Arizona, has doubled its bulk storage capacity within the past year. A second, 16-ft. "Horseshoe" for propane, recently installed, is shown here with the original one. The two tanks have capacities of 13,000 gals., each, and are designed for 250 lbs. per sq. in. operating pressure.

Sensational Values in New Counter Griddles!

Again the leader holds the line on prices—
gives you amazing value for your money!



GARLAND
Counter Griddle No. 224-2

CHECK!

COMPARE!

SAVE!

No. 230. Has 18 $\frac{3}{4}$ " x 30" griddle, two open top burners, black japan finish. No. 230-2 in stainless steel.

No. 224. Has 18 $\frac{3}{4}$ " x 24" griddle, two open top burners, black japan finish. No. 224-2 in stainless steel.



No. 130. Has 18 $\frac{3}{4}$ " x 30" griddle only, black japan finish. No. 130-2 in stainless steel.

No. 124. Has 18 $\frac{3}{4}$ " x 24" griddle only, black japan finish. No. 124-2 in stainless steel.

Only the leader can give such value at the price. Feature by feature, quality considered—has no equal today. Available for manufactured, natural or L-P gas. See your Garland dealer now!

GARLAND

THE TREND IS TO GAS

FOR ALL COOKING

Heavy Duty Ranges • Restaurant Ranges • Broilers • Deep Fat Fryers • Toasters
Roasting Ovens • Griddles • All Types of Commercial Cooking Equipment

PRODUCTS OF DETROIT-MICHIGAN STOVE CO., DETROIT 31, MICHIGAN

NEW PRODUCTS

Smokehouse Burner

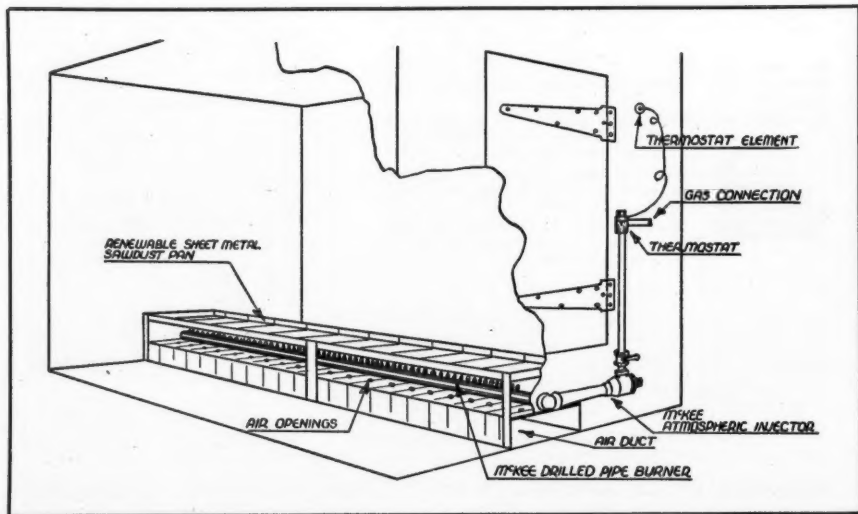
Eureka Equipment Co., P.O. Box 396, Beloit, Wis.

Application: Designed for meat smokehouses using low pressure gas, it provides a desirable method of heating small ovens in packing plants and cold storage locker plants.

Description: Burner is completely automatic and is equipped with all approved types of gas safety devices. Complete protection is provided by the use of a continuously burning pilot and a "Pilotstat" safety shut-off valve, requiring manual reset. The burner distributes heat uniformly throughout the oven and the injector assures maximum operating efficiency with gas. Construction is of heavy steel angles and sheets. Smoke is

provided by the heating of the sawdust shovelled into the sawdust pans, which are removable for cleaning and which have convenient handles.

Installation is simple, with only connection to the gas supply and simple adjustments necessary. The following equipment is provided with each assembly: Drilled pipe burner with injector and gas cock, air distribution duct, removable sawdust pans, pilotstat gas safety shut-off valve, continuous Bunsen pilot mounted on main burner, down-draft stack diverter for oven exhaust, and a "Partlow" automatic thermostat valve which provides accurate temperature control from 100° to 350° F., within 5° range by setting the desired temperature on the adjustable knob. The construction of this ther-



mostat eliminates any electrical connections.

The burner will handle any kind of gas available, including LP-Gas. The gas-air mixing unit, or injector, is designed to entrain air from the atmosphere for combustion.

The assembly is usually 1 ft. wide and 1 ft. in over-all height, including the pans. Complete instructions and installation diagram are provided with the unit.

The safety valve and pilot as well as diverter are of American Gas Association design and the injector is designed in accordance with recommendations of the National Bureau of Standards.



Gas Burner

Chicago Combustion Co., 455 West 55th St., New York 19.

Model: Nos. 2 and 4 Argil Gas Burners.

Application: For use with hot water urns, coffee urns, steam tables, sterilizers, boilers, etc.

Description: According to the manufacturer, the burners give higher gas burning efficiency because of the infra-red ray combustion with reflected heat. The burners operate on all types of gases.

No. 2 Argil burner specifications

are: 5-in. diameter combustion chamber; 8000 Btu, recommended for urns not to exceed 6-gal. capacity; weight 3½ lb.

No. 4 burner specifications are: 6-in. diameter combustion chamber; 12,000 Btu, recommended for steam tables and for urns up to 12-gal. capacity; weight 5¼ lb.

Trailer-Apartment Range

Integrity Manufacturing Co., 362 W. Garvey Ave., Monterey Park, Calif.

Model: King Size Apartment-Trailer.

Application: This is a new range which is designed for use in apartments, trailers, motels and cabins where the owner desires the conveniences of a full size range but does not have the space for one. The King size range will provide as much top cooking surface and oven space as found in a large range.

Description: An exclusive feature is the "RF Even-Heat" burner which is being patented. It is a unique one-piece, heat-conductor burner which



combines grate and burner in one unit. Each of the four burners and the grate above it is cast together and may be removed together. They are light and because of simple construction, are easy to clean. Their removal also makes cleaning of section under burner easy and fast. The burner-grate is supported on all sides so that it cannot tilt. All burners are 10 in. wide and the top of the range can accommodate four full size 10-in. pans at one time. Each pan can be fully centered over flame.

The oven is fully insulated. Dimensions are 20 in. wide, 20 in. deep, 13 in. high. It is large enough for family baking, and will accommodate any family size roaster. The oven has automatic control.

Control panel is built on an angle that makes for easier visibility. Height of trailer model is 25 in. The apartment model is 35 in. high; base is set back to allow for toe space.

Duct Furnace

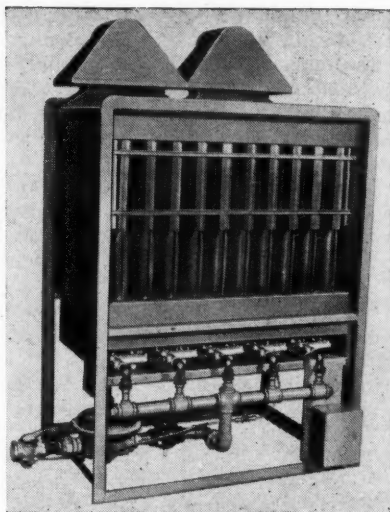
Naco Manufacturing Co., P.O. Box 310, Huntington Park, Calif.

Model: Duct Furnace.

Application: This new type furnace can be adapted to any size dwelling. It is especially good for larger buildings such as schools, stores, churches, theatres, etc. It is adaptable to any weather or locality.

The furnace is compact and is adaptable to a number of different heating problems. Installations may be made in basements, lower or upper floors, suspended from ceilings, in attics or on roofs. It can be installed singly or in battery.

New design eliminates the need for baffles through shaping and embossing of elements. Complete heat pattern and full heat absorption are assured. Pacific Multi-tubular burner is used with a new manifold hook-



up. Air adjustment is automatic, combustion complete. All burners are easily accessible; engineered for proper type of gas.

Five capacities of the duct furnace range in size from 90,000 Btu input per hour to 450,000.

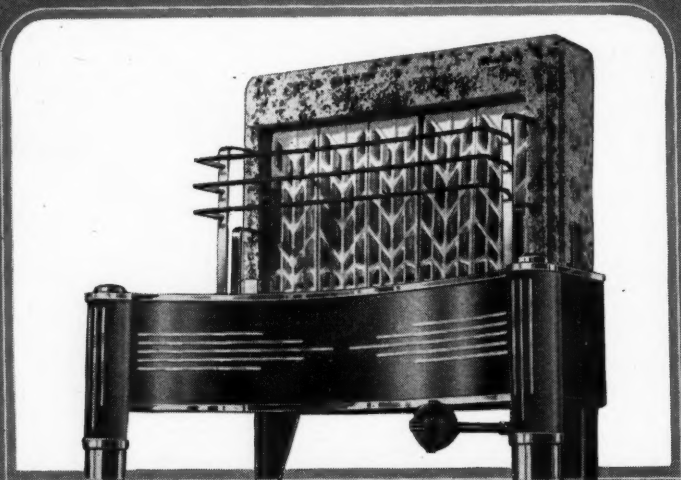
Description: Newest addition to the gas heating equipment of the Pacific Heater Division, the duct furnace inaugurates in its three largest models a new principle of controlled heat, referred to by the manufacturer as "duo stage temperature modulation." This feature is said to automatically reduce total heat delivery with undiminished air delivery. All units, which are approved by the American Gas Association, are adaptable for use with LP-Gas.

Check Valve

Grove Regulator Co., 65th and Hollis Sts., Oakland, Calif.

Model: Grove Chexflo Valves.

Application: Described by the man-



19 JULY 47

**Your "All Season" friend
the Humphrey Radiantfire**

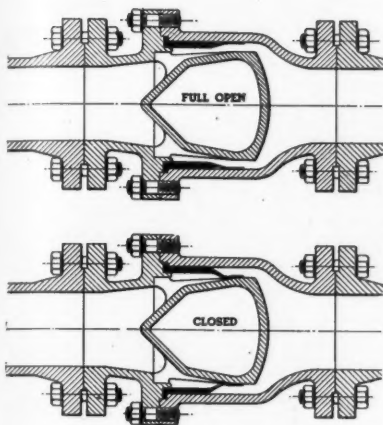
Every day — in every month of the year — Humphrey Radiantfires are delivering clean, cheery, radiant comfort in homes needing heat. For the chilly, rainy days of spring and summer; for the cool, snappy mornings and evenings of fall; for the extra severe winter days when the main heating plant is being forced to supply enough heat — for all these occasions, economical, smartly styled Radiantfires are unexcelled.

The downright dependability of Humphrey Radiantfires makes them goodwill builders for the dealers who sell them. Backed by over forty-five years experience in the manufacture of high quality gas appliances, they are recognized everywhere as leaders among radiant type gas heaters.

GENERAL GAS LIGHT COMPANY
KALAMAZOO, MICHIGAN



23 WARREN STREET, NEW YORK CITY • 2nd UNIT SANTA FE BLDG., DALLAS • 225 ELEVENTH STREET, SAN FRANCISCO



manufacturer as a simple, trouble-free check valve developed for handling air, gas, water and refined petroleum products at temperatures to 180° F.

Description: Embodying no metallic operating parts and ranging in sizes from ½ in. to 12 in., these check valves operate on low pressure differential. Featured is the tough flexible tubular operating member, comprised of a thick load section, tapered down to a sensitive operating lip which requires no differential pressure to effect positive bubble-tight shut-off.

Due to the resilient elasticity of the tapered synthetic rubber lip, it smoothly contracts to close on slack flow—prior to the start of back flow. In the open and closed position it is fully supported against extreme pressure or intensive impulse shocks by the inner walls of the valve body, and the cylindrical core which it tightly encompasses, it is said. As it reaches shut-off position, flow velocity increases to flush the seating surface of any small particles.

Domestic Meter

The Pittsburgh Equitable Meter Division of Rockwell Manufacturing Co.

recently introduced its new Rockwell-Emco No. 00 gas meter designed to measure manufactured, natural and LP-Gas. This meter is much smaller and lighter in weight than conventional designs. It measures only 8" long by 7-7/16" wide by 10-5/16" high. The net weight is but 8½ lb.

The outer casing consists of two streamlined aluminum alloy pressure castings that are joined with a single gasket. This casing material will not rust or corrode and has a high fracture resistance for safety.

The double diaphragm measuring unit has a maximum capacity of 150 cfh at ½" absorption of .06 sp. gr. natural or manufactured gas. When used to measure LP-Gas the capacity rating is 90 cfh at ½" pressure absorption of 1.5 sp. gr. gas. These capacities are ample for practically all domestic services.

Flared Fittings Catalog

Information on flared brass fittings, compression tube fittings, range connectors and tubing has been incorporated in the latest catalog of the General Steel Products Co., P.O. Box 4703, Atlanta, Ga.

Data concerning specifications and prices are given, together with illustrations of the equipment, in this catalog.

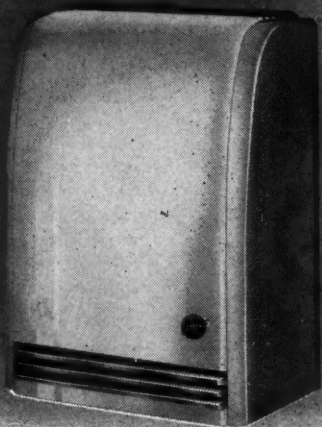
Copies of the catalog may be had upon request to the company.

Equipment Catalog

Expansion of the activities of the Superior Refrigeration Supply, 1816 Walnut St., Kansas City 8, Mo., has extended to the distribution of a complete line of LP-Gas equipment and appliances.

A catalog, especially designed for the liquefied petroleum gas industry, is now being published.

LET BEAUTY BUILD YOUR HEATER SALES



New RHEEM gas console heater

Women customers will like the simple gracious lines of this Rheem gas console heater. Its handsome antique finish brings new beauty to any interior. Tall functional design increases heat circulation and requires less floor space. Narrow base of heater permits installation on strip between wall and rug.

Sales are easy because the low price and economical operation fit any budget. Approved by American Gas Association, whether vented or unvented. Available in three popular sizes: 25,000; 35,000; 50,000 B.T.U. Get full information today. Write Rheem, 570 Lexington Avenue, New York 22, New York.

RHEEM . . . *making houses into homes*



Fred A. Rives Made Georgia President



W. H. HOAGLAND



GEO. W. BACH

A meeting of the Georgia LP-Gas Association was held at the General Oglethorpe hotel in Savannah, Georgia on May 5.

Approximately 75 LP-Gas dealers and sales representatives attended. Interesting and enlightening talks were given by Clarence Spiegel, Servel, Inc.; Walter Hoagland, Fisher Governor Co.; George Bach, and George Southworth, Skelly Oil Co.

The following officers were elected to serve for the new year beginning July 1, 1947:

Fred A. Rives, Columbus, president.

Jack Majors, Valdosta, vice president.

Sidney Stapleton, Atlanta, secretary-treasurer.

LP-Gas Gets Publicity On National Quiz Broadcast

The national radio program, broadcast over the Mutual Don Lee System, entitled "The Quiz of Two Cities," devoted its time on May 24th to a contest between LP-Gas representatives in northern and southern California. Similar opportunities have been given members of this industry in other broadcasts in eastern cities earlier this year.

The one in May was between San Francisco and Los Angeles, with the latter getting the decision.

San Francisco participants were Al Maynard, Paul Shannon, E. C. McEneaney, Carl Golden and Dave Purrington. Southern California was represented by Ralph Meeder, Warren McMillen, Spence Selby, Clayton Parkhill and Paul Lady.



Georgia LP-Gas dealers who attended the annual state association meeting May 5 in Savannah.

POWER

Butane Truck Hauls 200 Tons of Clay Per Day

THE large Santa Fe Springs plant of Pacific Clay Products, Los Angeles, manufacturing sewer pipe, 4-way telephone conduit and other clay products, has an almost insatiable greed for clay, 200 tons of it every day.

The clay haul runs from two clay mines at Alberhill, the most distant ones, 55 miles away, and others a little closer in Temescal Canyon and near Corona, seven deposits altogether. The average

round trip is about 100 miles, with the longest one about 110 miles.

These clays are gouged out of the several clay pits by three bulldozers. Clay at Alberhill is dozed into chutes and from these discharged into a 3½-ton Fruehauf, bottom dump trailer which has a lengthened body to handle 5 to 7 tons per load. This carries its load varying distances to a chute from which it is loaded into the bottom dump trailers used in the main "clay



At left, Diamond "T", LP-Gas-powered tractor with empty Fruehauf semi-trailer and trailer en route to clay mines at Alberhill, at point of passing loaded unit en route to plant at Santa Fe Springs. Latter unit is powered with an Autocar-Cummins diesel engine, since changed to other hauling and replaced by another LP-Gas Diamond "T".



By FRED M. BURT

haul." At the Temescal Canyon mines the clay is dozed directly into a long chute which serves the "clay haul" units.

The two clay-hauling trailer units each consists of a Fruehauf bottom dump semi-trailer and trailer. The weight of the semi-job is 6060 lbs., and each body has an 11-cubic yard capacity, and they are loaded to stay within the 76,000-lbs. total weight limit allowed on the highways. The overall length of the tractor and two trailers is 60 ft. and they are carried on 10.00/22 tires.

No. 1 run starts from the garage in Santa Fe Springs, at 12 midnight, with the first driver making two round trips in 10 hours; then another driver takes over and makes two round trips till 8 p.m. No. 2 run operates similarly between 2 a.m. and 10 p.m. Clay hauls are made six days a week, seven days in times past when required. Each unit has a 4-hour lay-over at the garage, each day, the headquarters of the maintenance department under Barney Kemp, maintenance superintendent. This department has a 25-man personnel to look after all maintenance. T. P.

Thompson is garage foreman and Orlo Lane, plant maintenance foreman. The shop operates on slightly staggered shifts, from 7 a.m. to 6 p.m., six days a week, with night and Sunday work as required.

Two Model DC10062—174 in. wheelbase Autocar tractors with 150-hp. Cummins diesel engines, have been in use on this clay haul until lately, when they have been transferred to less rigorous runs, such as to Stockton and other points, delivering finished products. They have been supplanted by two new Diamond "T" tractors. These are powered with 130-hp. Hercules engines of 558-cu. in. displacement, with counterbalanced crankshafts, and high compression heads for the 7.1 to 1 compression ratio to use liquefied petroleum gas.

Details of Equipment

The tractors are equipped with Ensign Model R converter and regulator units, and 1¾ in. LPG carburetors. The LP-Gas is carried in two 50-gal. tanks at 250 psi, one on each side. This LP-Gas leaves the tank in use, under its own pressure, to travel through a fuel filter and then a primary heating coil; from here on to the primary regu-



Driver Dale Ward in front of LP-Gas "clay haul" equipment, with Fruehauf semi-trailer spotted for bottom-dumping. Clay handling equipment in background, with end of 1200-ft. craneway shown in far right background.

lator which reduces the pressure to about 5 lbs.; then through the secondary heating coil, housed in the same hot water heating unit as the primary heating coil.

The gas is then piped to the secondary regulator for a further reduction in pressure to 3 lbs. This feeds the special, $1\frac{3}{4}$ in. LPG carburetor, maintaining a constant and desirable pressure regardless of the quantity of fuel demand.

On each trip the tanks are brought back to full, en route at a station that handles LP-Gas. About 30 gallons is used on an average trip. Although each unit travels 2400-2500 miles per week,

they have not been in use long enough to develop any maintenance cost figures. It is not expected that the engines will require an overhaul till well past one year's operation (about 125,000 miles).

Plant Is the Largest

The plant supplied by this "clay haul" is one of the most modern, highly mechanized and largest of its kind in the country, with a main building 300 ft. x 1300 ft. containing about 30 drying aisles, each nearly 200 ft. long. These are filled up with pipe and conduit formed on four extrusion presses, one of which, an hydraulic unit, has prob-

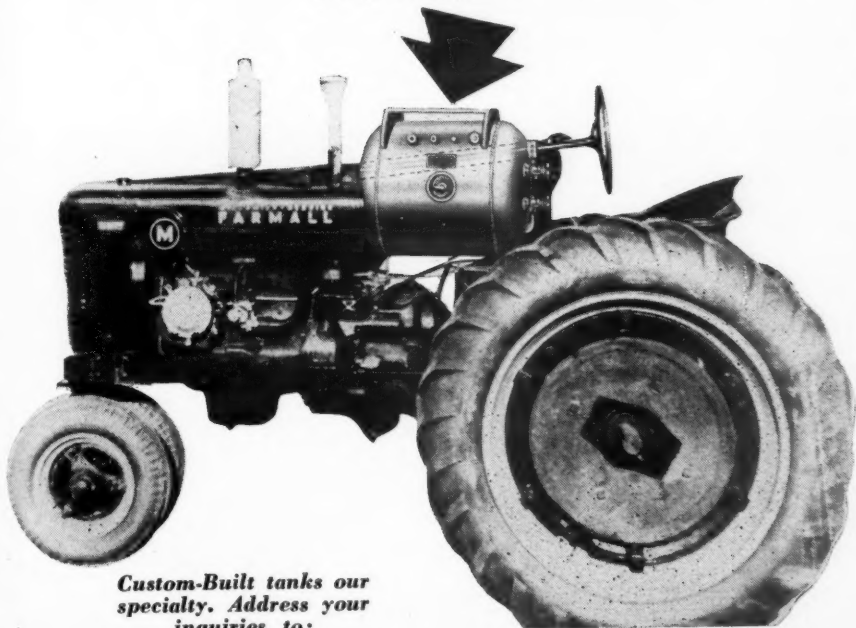
CUSTOM-BUILT MOBILE AND TRACTOR TANKS

Available For IMMEDIATE DELIVERY!

Santa Fe "custom-built" Mobile and Tractor Tanks, for Farmall Tractors, Models "M" and "H", are available for immediate delivery from stock. Here is a compact, sturdy Butane-Propane Tank, automatically welded of fine-quality material in compliance with ASME U-69 Code and NBFU safety requirements. This tank is complete with mounting brackets ready to install—JUST BOLT IT ON.

The illustration below shows a Santa Fe Tractor Tank installed on a Farmall Model "M" Tractor. The dotted lines indicate an extra strong tube which extends all the way through the tank. This tube enables the steering column of the tractor to "slip through" the tank—places the tank in a convenient, out of the way location.

Other Santa Fe Mobile and Tractor Tanks in stock will meet most tractor and truck requirements. Give us the name and model of your equipment—we can make prompt delivery.



*Custom-Built tanks our
specialty. Address your
inquiries to:*

SANTA FE ENGINEERING AND EQUIPMENT COMPANY

3810 Fruitland, Maywood (In The Center Of The Los Angeles Industrial Area), California
Telephone: LOgan 5-2111

ably the capacity to extrude larger pipe than any other press in the country. It will press pipe up to size of 8 ft. long and 42 in. diameter.

Plant Needs 200 Tons Daily

The products formed with this equipment are fired in 42 beehive kilns and in a new 295-ft-long Allied Engineering tunnel kiln. With the present operation on a 33½-hr. cycle, it produces about one kiln-car load per hour, size 7 ft. 5 in. wide x 9 ft. long. All of this adds up to the necessity of bringing in that 200-tons of clay, daily. Thus the "clay haul" is an operation of vital importance. Seven to nine clays are used in the various blend-

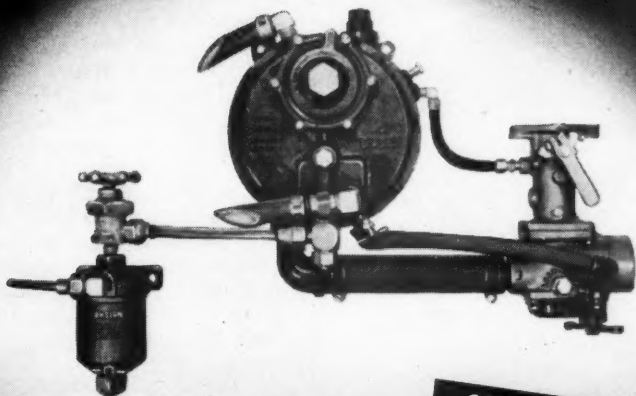
ings to obtain proper bodies for sewer pipe and other extruded clay products. The two-trailer, 25-ton loads are dumped into a conveyor pit, moved up into a primary crusher, through a minus 1½-in. drypan, and then into three huge storage bins.

Two high cranes, traveling on a 1200-ft. long craneway, and carrying 2-ton clamshell buckets, stockpile the clays in storage bins. The buckets are also used to blend clays by making up clay piles of the various clays in 2-ton batches, then turning them over three times. After other clay-preparation operations the clay bodies are de-aired and extruded into pipe.



Exit end of 295-ft. Allied tunnel kiln with workmen unloading 4-way conduit and sewer pipe after car was moved to this track on a transfer car farther to left. Note International tractor used to haul loaded trucks.

ENSIGN the most widely accepted Carburetion Equipment for L.P.G.



TRUCKS • TRACTORS • BUSES

Successful engine operation on Butane-Propane depends largely upon the carburetion and its method of application. The Ensign model "R" Butane Regulating Unit in conjunction with Ensign Carburetors assures you the best **BALANCED CARBURETION** available today.

Specify Ensign for your engine conversions. Protect yourself and your customers with proven equipment—carburetion built by specialists with over 36 years carburetion experience.

CHECK THESE BENEFITS

- ✓ Easy Starting
- ✓ Fast Acceleration
- ✓ Full Power
- ✓ Maximum Economy
- ✓ Easy to Install
and Service
- ✓ Thousands In Use

ENSIGN

CARBURETOR COMPANY

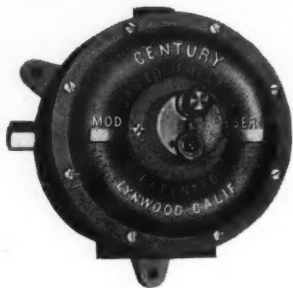
7010 SOUTH ALAMEDA STREET • P.O. BOX 229 • HUNTINGTON PARK, CALIFORNIA

BRANCH FACTORY: 2330 WEST 38th STREET, CHICAGO 36, ILLINOIS

"Pioneers in Efficient Carburetion" • Established 1911



LP Gas Carburetion



Model M Converter

Weight: 4½ lbs. Diameter: 6 in.
Working parts easily accessible.
High pressure valve removable from
outside of case. Capacity up to 200
H.P.



**Straight Butane or
Natural Gas Carburetor**

**20 years manufacturing
butane-propane equipment**

Century Gas Equipment Co.

**11188 Long Beach Boulevard,
Lynwood, California**

Tank Design Aids Tractor Installation

IN THE conversion of trucks and tractors for use with butane or propane there are many problems which must be solved before the job can be considered well done. One which has faced dealers making conversions on International's Model M and H "Farmall" tractors has been the location of the fuel tank.

There is only one practical place on the entire tractor where the fuel tank can be satisfactorily placed. This spot is immediately in front of the driver. The problem which arises here, however, is the steering wheel, which, unfortunately, does not allow sufficient room for the mounting of an LP-Gas tank below it.

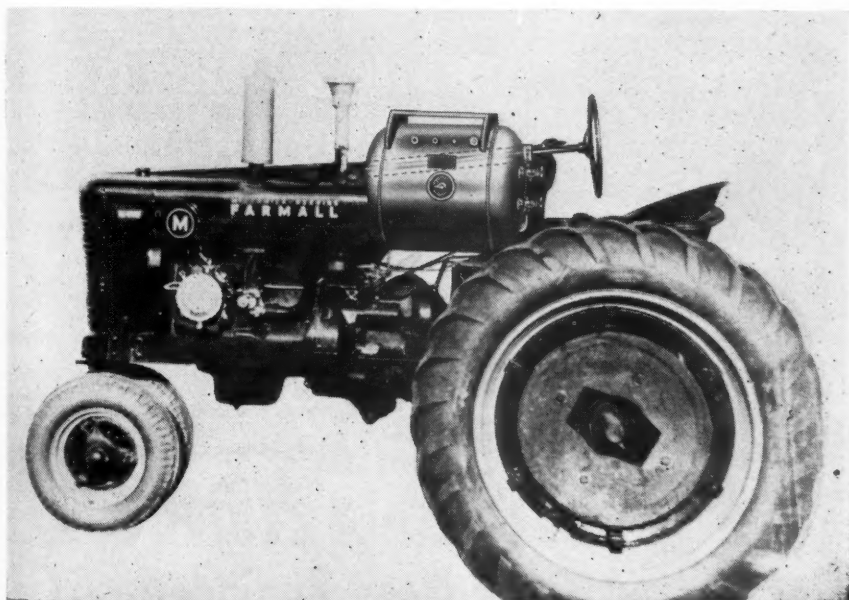
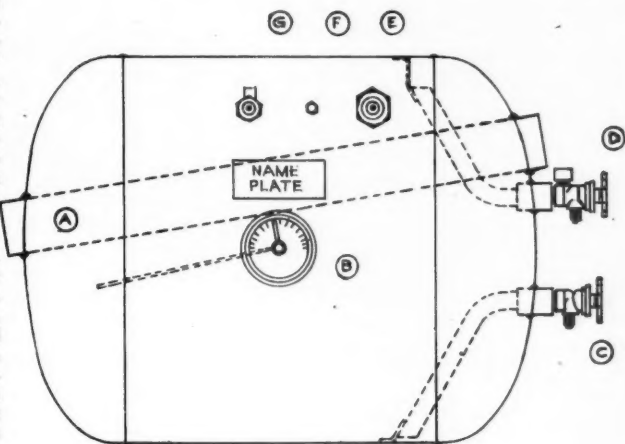
Installation Is Safe

To overcome this problem tanks have been developed which can be mounted in spite of the steering wheel and which are safe, practical and economical. One of the first tank firms to develop this type of tank, and the manufacturer of the tank illustrated in this article, is the Santa Fe Engineering and Equipment Co., of 3810 Fruitland Ave., Maywood, Calif.

A manufacturer of all types of LP-Gas pressure vessels, this company has developed a line of mobile tanks with the idea of supplying stock tanks for any type of tractor or truck. The development of the Farmall model has proven to be one of their best efforts.

The tank is designed in such a manner that it can be slipped over the steering column and secured to the frame of the tractor. This is made

A—Tube through which steering column passes on International "Farmall," Models M and H. B—Recessed rotary gauge for measuring liquid level. C—Liquid valve with pipe extending to bottom of tank for withdrawal of liquid. D—Dry valve (vapor) with safety valve. Pipe extends to vapor space. E—1½ in. quick filler valve. F—13½% fixed liquid level outage valve, used when filling. G—Vapor return valve for equalizing vapor pressure when filling.



New design of LP-Gas tank for tractor installations. Steering column runs through tank.

possible by welding a 3-in. tube into the heads of the tank. The tube is set at the same angle as the steering column and does not touch the column at any point because of its greater diameter.

Installation is simple and fast. The steering column is removed. The tank is then mounted on the tractor. As brackets are welded on the tank at the plant to simplify the mounting operation, no field welding is necessary. The brackets are easily fastened to the tractor frame. Only a set of bolts and a wrench are required.

When the tank is properly mounted and secured, the steering column is returned to proper position by passing it through the tube in the mounted tank.

This tank is manufactured for Farmall models and is built to propane

specifications under NBFU and ASME U-69 code requirements.

All valves and fittings are protected with heavy steel guard. Tanks are 22 in. in diameter; 29 in. overall length. Weight, 135 lbs. This model includes recessed rotary gauge for measuring liquid; liquid valve, with pipe extending to bottom of tank for withdrawal of liquid; dry valve with safety, with pipe extending to vapor space; 1 1/4 in. quick filler valve; 13 1/2 % fixed liquid level outage valve; and a vapor return valve to equalize pressure when filling.

New Company Formed

Semo Gas Company, Cape Girardeau, Mo., capitalization \$50,000. Incorporators: C. P. and Stella Lowry, L. C. Harston, Clara Harston, and William Sides.



AVAILABLE IN PLAIN OR LUMINOUS DIAL

Electric and Carburetor Engineering Co.

2323 E. 8th St.

"Pioneers of the Butane Industry" Los Angeles 21, Calif.

STOP MOTOR LUG!

Illustrated is 91G Butane Mileage Meter. A Special 2 1/2" back connected negative pressure intake meter which, if butane operated vehicle is driven correctly as to manifold pressures it will be impossible to lug the engine thus producing at least 10% better mileage and MUCH longer engine life.

Validity of City Tax Upheld For Coral Gables, Fla.

Validity of a city utility tax imposed on bottled gas was upheld in Coral Gables, Fla., recently in a ruling on a test case by Circuit Judge Charles A. Carroll.

The action had been brought against the city of Coral Gables by several bottled gas companies.

The plaintiffs contended a 1945 legislative act authorizing municipalities to tax utilities did not apply to them because they do not hold public utility franchises. They also contended that if the act intended their inclusion, the act is unconstitutional.

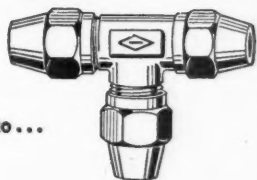
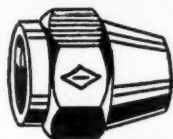
The suit was brought by Southeastern Natural Gas Corp., Gas-Oil Products, Miami Bottled Gas Co. and Brooks Gas Co., all Florida corporations, and by Carbide and Carbon

Chemicals Corp., of New York. Attorneys Thomas Johnston and W. E. Dunwoody represented the companies.

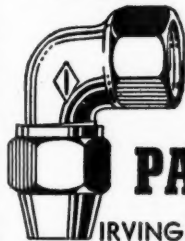
LP-Gas Manufactured In Guatemala

The establishment of a butane manufacturing and bottling plant at San Jose is included in the Guatemalan petroleum contract with a United States oil company. The installation will introduce gas fuel for industrial and domestic purposes for the first time in Guatemala. The company has on display in its Guatemalan offices stoves, cylinders, and other equipment using gas. The scarcity of electric power and the increasingly high fuel-wood costs favor the acceptance and use of gas in that country, according to advice from the American Embassy in Guatemala.

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PARTS & BEARINGS CO.**

IRVING, KANSAS

1418-A Grand Ave.,
Kansas City, Mo.

THE TRADE

Two new sales districts have been established by the **L. J. Mueller Furnace Co.**, Milwaukee, according to an announcement recently received. They are the Central district and the Northern district.

Sales manager for the Central district is Robert M. Rosebrough, who has been with Mueller for 34 years. He will be assisted by J. Stoddard Rosebrough, his son, who has been associated with Mueller for 17 years.



R. M. ROSEBROUGH

Headquarters for the Central district is the Arcade Building, St. Louis. A Mueller branch has been maintained in St. Louis for almost 35 years, with the senior Mr. Rosebrough in charge.

Comprising the Central district are the state of Missouri, Kansas, Nebraska, Colorado, western Iowa, southern half of Illinois, southwestern Indiana, western Tennessee and the bulk of Kentucky. Arkansas and Oklahoma are temporarily included in the Central district.

The new Northern district is managed by R. Dean Hearne, with headquarters at the home office in Milwaukee. Assisting Mr. Hearne are Tom Brice, Harry B. McKee, E. A. Liessman and Elmore Scheck. Included in the Northern district are the entire states of Wisconsin and Minne-

sota, central and eastern Iowa, northern half of Illinois, and northwest Indiana.

Phillips Petroleum Co., Bartlesville, Okla., announces the transfer of its liquefied petroleum gas (Philgas) marketing organization from the research and development department to the sales department. K. W. Rugh will continue as manager of the Philgas Division of the sales department.

The transfer was made to consolidate the management of Phillips sales activities and will enable Phillips to more adequately serve its liquefied petroleum gas consumers and distributors.

The Philgas organization within the sales department will continue to market Phillips liquefied petroleum gas as it has in the past.

The annual report for 1946 of **Black, Sivalls & Bryson, Inc.**, Kansas City, Mo., has recently been issued. The brochure is attractively illustrated with photographs and drawings done by staff artists and produced in lithography.

Historical highlights of the company's background are given together with the financial statement. The front cover carries a reproduction of a painting of the Turner Valley oil field in Alberta, Canada.

The appointment of Reese B. Lloyd as manager of the western plants of **Rheem Manufacturing Co.** has been announced by W. E. Curran, vice

president and general manager. He will make his headquarters in Los Angeles.

For the past year Mr. Lloyd has been manager of the larger of the company's two Chicago plants. He joined Rheem in July, 1944, as production manager of one Chicago plant. For nearly a year he was assistant manager for both Chicago plants.

R. J. Seltzer, for four years manager of the Sparrows Point, Md., plant of Rheem Manufacturing Co., has been appointed manager of the company's eastern plants.

Mr. Seltzer joined Rheem in 1938 as an engineer at the South Gate, Calif., plant and shortly thereafter

was made plant engineer. In 1941 he was transferred to Rheem's Chicago 34th St. plant as plant engineer.

C. Thomas Miller has been named Eastern regional manager of appliance sales for Rheem and will make his headquarters in New York, it has been announced by Frank J. Nugent, general manager of appliance sales. He replaces W. W. Stevens who has resigned.

Mr. Miller joined Rheem in 1942.

J. D. Anderson, head of the L.G.E. Corp., with headquarters in San Francisco, announces the appointment of Robert A. Kiesel as the company's agent for the states of Utah, Colo-



When American Stove Co. offered a new "Magic Chef" in exchange for the oldest range made in its Harvey, Ill., factory and still in use, Mrs. Fred Bade (center) won the contest with this 1902 model. With her are pensioners and long-time employees who remember when this range was the latest style. The occasion was the 50th anniversary of the company's Harvey factory. In constant use for 45 years, the range has never required repairs or replacement of parts.

rado, western Wyoming, Idaho and eastern Oregon.

Headquarters for this new distributor will be the Kiesel Bldg., located in Ogden, Utah.

Mr. Kiesel is well known in the sports world as a sprinter of international fame, having participated in the Olympic Games in 1932.

At a meeting of the board of directors of the **American Car and Foundry Co.**, held May 29 in New York City, the resignation of F. A. Stevenson as president was accepted. Mr. Stevenson had been associated with ACF for more than 40 years in various capacities.

Charles J. Hardy, Jr., who heretofore had served the Company as its executive vice president, was elected to the presidency. Mr. Hardy served as an officer in the United States Naval Reserve in World Wars I and II.

Cribben and Sexton Co. have announced to dealers and utilities a plan to provide installation and replacement of "Universal" gas ranges in home economics departments of educational institutions.

Under this program, schools can purchase Universal gas ranges from their dealer or utility at approximately 50% of the retail list price. This includes installation and servicing. The ranges will then be replaced periodically at no charge to the school. The replacement period is determined between the school and dealer or utility. Minimum period is



C. J. HARDY, JR.

one year, maximum three years. The agreement runs for six years, and can continue longer if agreed by school and dealer or utility.

In support of this program, Cribben and Sexton will sell ranges to dealers or utilities at a special school discount. A prescribed allocation for school sales has been established.

Harold E. Jalass, general sales manager of the company, says: "There is a crying need for modern gas equipment in schools, and for modern methods of teaching the care and use of this equipment to our customers of tomorrow. The forthcoming A.G.A. Teachers Manual and motion picture film are an excellent approach to this instruction problem. Our replacement program is designed to support these fine promotions by providing the 'real McCoy' for students."

The company has prepared a folder that details their program from the school's point of view. Copies are available on request.

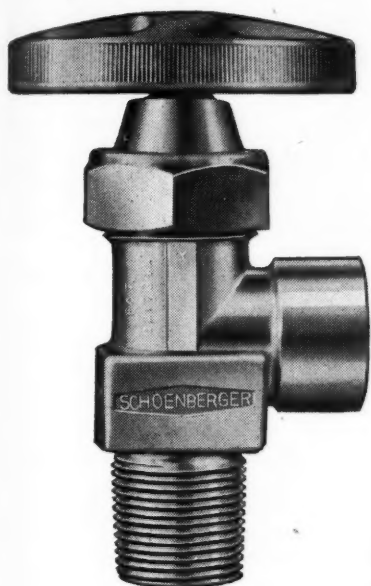
Cribben and Sexton, through Mr. Jalass, also announces the appointment of Roy C. Johnson as sales representative in northern California, Nevada, Oregon and Washington. Mr. Johnson will operate under the supervision of Charles R. Woodson, Pacific division manager.

Mr. Johnson has had 20 years experience in the gas range industry on the Pacific Coast, covering both the retail and wholesale field.

Mr. Johnson's headquarters will be in the San Francisco Furniture Mart where Cribben and Sexton Co. maintain an office and display of "Universal" gas ranges.

C. H. Hobbs & Associates, of Pasadena, have been appointed exclusive sales agents in the 11 western states for Haylo heaters, which are manu-

Schoenberger "HOUSE LINE" Valves



**ASSURE
SAFE,
QUICK
and
POSITIVE
CONTROL**

We manufacture Valves, Fittings and Accessories for the L-P Gas Industry.

Write for Information

The same features of high quality construction which characterize Schoenberger L. P. Gas Cylinder Valves are to be found in the "House Line" valves. Their ruggedness and advanced design assure long wear and most dependable service.

Schoenberger "House Line" valves are available either with $\frac{1}{4}$ " diameter capacity for vapor withdrawal or $\frac{1}{8}$ " diameter capacity for liquids.

THE W. J. SCHOENBERGER CO.

8810 HARVARD AVENUE

• CLEVELAND 5, OHIO

ANNOUNCING

OUR

APPOINTMENT

as representative for

**PARKHILL-WADE
PRODUCTS**

**CONTINENTAL
AND
HOLLYWOOD
WATER HEATERS**

**ROYAL
FLOOR FURNACES**

L. G. E. CORPORATION

1355 Market Street
San Francisco

105 Lake Street, Reno
Kiesel Bldg., Ogden, Utah

factured by McCulloch Motors Corp., Los Angeles.

The McCulloch firm has established a new heater division for the production of Haylo heaters in two sizes.



G. R. SCHUMANN



W. D. DICKEY

Rochester Manufacturing Co., Inc., announces the appointment of G. R. Schumann Co. as their exclusive West Coast representative for the territory covered; namely, the 11 western states consisting of California, Oregon, Washington, Idaho, Montana, Wyoming, Colorado, Utah, Nevada, Arizona, and New Mexico.

G. R. Schumann was formerly assistant to the president of Dunlop Tire & Rubber Corp., of Buffalo, New York; then general manager of the Pacific Coast operations for the same company.

Wm. D. Dickey was formerly manager of Pacific Meter Works of American Meter Co., Inc., and also director of that company. He was for some years thereafter a member of the San Francisco Stock Exchange.

Roberts & Mander Corp., Hatboro, Pa., makers of "Quality" ranges and steel kitchen cabinets, has announced the appointment of Marvin F. Boss as

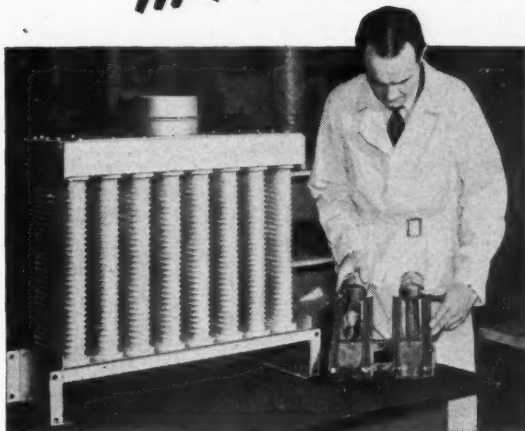
BUTANE-PROPANE News

1,000 DEGREES
in 18 inches!

...and quicker,
more compact
heating for you!



Unit Heater



IN a Janitrol Gas-Fired Unit Heater, the patented heat exchanger tubes are only 18 inches long. But in that 18 inches, enough heat is carried away by fan propelled air to cause the hot burning gases to cool *more than 1000 degrees in temperature!* That's *fast* heat transfer . . . and that means a *lot* to you!

First, you get *quicker* heat. There's no bulky combustion chamber to be heated up . . . no excess metal to rob the heat the area should be getting. And when the unit automatically turns off, heat

stops quickly . . . there's no fuel-wasting.

Second, elimination of the combustion chamber saves space—gives greater headroom wherever Janitrol is installed in plant, warehouse, office or store.

Rapid heat transfer is only *one* of Janitrol's many advancements in unit heater design. For Janitrol units have been engineered to give the user better performance, longer life and greater economy of operation. For a *complete* description of Janitrol's many exclusive features which make Janitrol easier to sell than to sell against. Write Surface Combustion Corporation, Toledo 1, Ohio.

Janitrol

GAS-FIRED HEATING EQUIPMENT

Here's Something NEW in RANGES!

With the Exclusive
RF*
EVEN-HEAT BURNER



A DEPARTURE from the OLD—that's the NEW Bien trailer-apartment range now being introduced for LP-Gas. It has many features—but the one which is startling is the exclusive RF* Even-Heat Burner which consolidates burner and grate into one casting for each of the four burners. It's revolutionary—and so practical—that women will love it. Grate is so designed that heat is conducted uniformly to all parts of pan. It's supported on four sides—can't tip. Burner and grate can be removed in a single motion for cleaning purposes.

Other Features Include:

- Rockwool insulation
- Top accommodates four 10 in. pans
- Large oven—fully insulated
- Automatic oven control
- Models for trailers or apartments

*R F—RADIANT FIN
(copyright and patent applied for)

INTEGRITY

MANUFACTURING COMPANY

362 W. Garvey Ave. Monterey Park, Calif.

sales representative for the entire state of California.

Mr. Boss will divide his time between the two district offices in San Francisco and Los Angeles. He was formerly in charge of sales in southern California, and now takes over the northern California territory as well, replacing G. R. Porter, who has resigned.

United Petroleum Gas Co., of Minneapolis, announces two new appointments in their organization.

E. P. Pieper was elected assistant secretary and assistant treasurer at the last meeting of the board of directors. R. E. Bolinger has been promoted to purchasing agent from his previous assignment as assistant purchasing agent.

Southern Gas & Equipment Co., which in about seven years has grown under the management of Frank P. DeLarzelere from a two-man organization, operating an LP-Gas wholesaling and jobbing business in eight or nine states, to a manufacturing and wholesaling firm with sales in 1946 in 28 states, has moved its general offices from the Atco Building in Tulsa to the Ber-ryhill Building in Sapulpa, Okla.



F. P. DeLARZELERE

"It wouldn't have been such a problem 3½ years ago," says Mr. DeLarzelere. "Then there were just one man, one girl and myself. But since then we have grown until our administrative, engineering and sales offices occupied half of the third floor of the Atco Building. We had acquired

BUEHLE



PROPANE-BUTANE TANKS

Buehler's uniform high production cylinders and spheres for Butane and Propane are designed in accordance with API-ASME Codes for safety and long life. Extra care is given the critical points—welding, finishing, fittings. You can't buy better tanks at any price. Order now for early delivery. Spheres and horizontal Butane-Propane tanks are now in production.

CHECK THESE

✓ 27 Years
Experience
✓ Prices
✓ Service

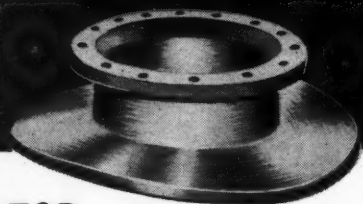
QUALITY YOU CAN SEE

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FOR QUICK SALE

WE HAVE ON HAND ONLY 92 LENAPE TYPE "R" MANHOLE NOZZLES (WITH COVERS)

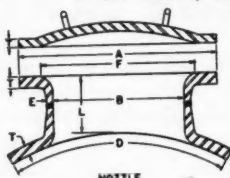
The ideal manhole for moderate pressure service—suitable for propane storage tanks. Its rounded corner, providing easier access to the vessel, is a distinct advantage. Permits a striking reduction in weight of costly materials, as compared to heavy American Standard dimensions—particularly economical in alloy constructions.

NEW \$100

UNUSED

In Lots of 10
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SPECIFICATIONS

API-ASME pressure rating 200 lbs. @ 250°F. Flange, "A" 26 in., "F" 20 1/4 in. No. bolts, 28. Size bolts, 7/8 in. Bolt circle 24 in. "B" 18 in. "T" 1 in. "E" 5/8 in. Nozzles "L" 7 in., "D" 29 in.; curved to 5 1/4 in radius tank; weight, 270 lbs. Dished cover, thickness 1 in., weight 160 lbs.

GARY STEEL

PRODUCTS CORPORATION
NORFOLK, VA.

the Sapulpa tank division, contract mills in five other cities, and otherwise spread out until such a move was more than just an ordinary day's chore. It is quite fortunate, I believe, because we will be closer to our Sapulpa production, and no farther removed from our other operations. In the meantime, we shall maintain an executive office in Tulsa, and our telephone number will be the same as it has been."

The company moves June 15, taking some 40 administrative, sales, engineering, and accounting personnel to its new location in Sapulpa.

Bryant Heater Co. announces the opening of a new branch office in Cleveland with Phil D. Bertholf as



P. D. BERTHOLF

manager. The new branch office will handle distribution of Bryant products for the north-eastern Ohio area.

Mr. Bertholf comes to his new post from the main Bryant plant in Cleveland, where since 1945 he has directed allocations of manufactured

products to Bryant's 43 distributors throughout the United States. Previously he was assigned to Bryant's London Road plant in Cleveland to assist in the company's war building program.

Mr. Bertholf first joined Bryant in 1937 as Southern division sales manager in the company's Chicago sales organization.

Cash prizes are being offered for best installation photos of any Bryant Heater product, it has just been an-

KAMP KIT

for

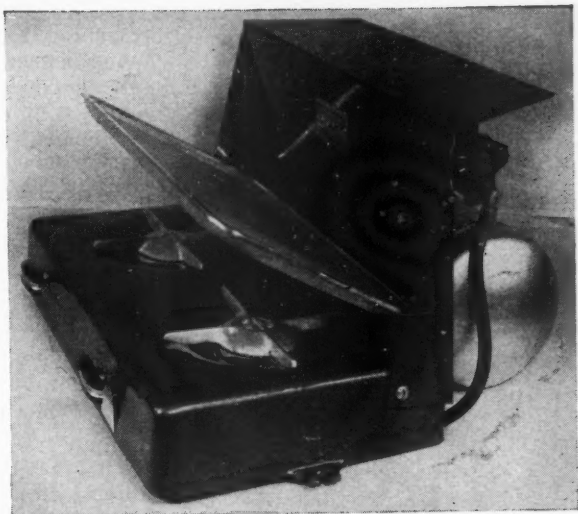
Trailers-Boats Camping

- It folds—easy to carry.
- It weighs less than 30 lbs.
- Provides approx. 30 hours burning time.
- Griddle takes place of pots and pans.
- Patented valve makes it possible to use any mixture of manufactured, natural or LP-Gas at any altitude, by one simple adjustment on outside of stove.

Hot plates sold separately
Patents Pending

Mr. Dealer:

The Kamp Kit is excellent to sell new users on LP-Gas. Leave one at your prospects home for a few days to prove the advantages of this superior fuel.



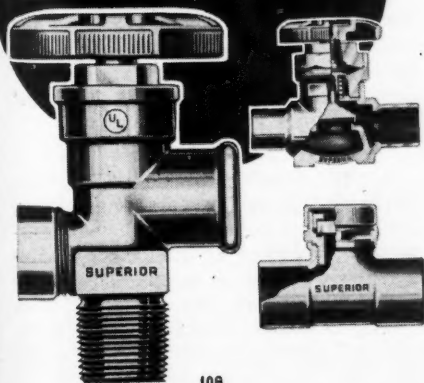
HANSEN BURNER PRODUCTS

10600 Prairie Ave.

Inglewood, Calif.

Superior LP-GAS VALVES AND ACCESSORIES

For Bulk Stations, Tank Trucks, and
above and below ground systems.



108

- ★ LP-GAS CYLINDER VALVES are listed as Standard and for re-examination service by Underwriters' Laboratories, Inc.
- ★ GLOBE, LINE AND ANGLE VALVES — Diaphragm Packless and Wing Cap — in Flare sizes from $\frac{1}{4}$ " to $\frac{5}{8}$ " O.D.; Sweat sizes from $\frac{1}{4}$ " to $2\frac{1}{2}$ " O.D.; F.P.T. sizes from $\frac{1}{2}$ " to 2".
- ★ SIGHT GLASSES, suitable for any normal LP-gas pressure. Entire top assembly removable while soldering lines to body.
- ★ FLARE FITTINGS, including Unions, Couplings, Adapters, Elbows, Tees and Nuts — listed as Standard by Underwriters' Laboratories, Inc.

SUPERIOR
VALVE & FITTINGS COMPANY
PITTSBURGH 26, PENNSYLVANIA

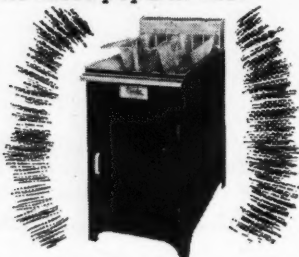
PITCO *Frialators*

REG. U.S. PAT. OFFICE

USE GAS EXCLUSIVELY

Because:

Our experience proved that GAS
is the most popular fuel.



Pitco Frialators save FAT...SPACE...GAS

- Thermostatic Heat Control
- Patented cool zone — clean frying
- No fire hazard
- Economical... to buy, to use

Pitco Frialators are business builders
— more business means more gas
load, PITCO FRIALATORS pay
the gas bill with fat-cost savings.

Originators of the Modern Deep-Fat Fryer

J. C. PITMAN & SONS SALES CORP.

Sole Manufacturers of Pitco Frialators

711 BROAD STREET

LYNN, MASSACHUSETTS

nounced by the Bryant Heater Co. Any person connected with the specification, sale or installation of Bryant Heater products is eligible, and July 15 is the final deadline for entries.

The first prize is \$100 cash, with second and third bringing \$50 and \$25 respectively, and 24 prizes of \$2 each being offered.

Entries will be judged not on the quality of the photographs, but on the merits and interest value of the particular installations depicted.

The details of the contest may be acquired by dropping a post card to the company in Cleveland, Ohio.

Robert H. Taylor was elected vice president in charge of sales of Florence Stove Co. at a recent meeting of the board of directors. Mr. Taylor succeeds Harvey E. Golden, who died in January.

Mr. Taylor, formerly general sales manager, has been associated with the Florence sales organization for 15 years, a good portion of this time as manager of the New York sales division.

Mr. Taylor makes has headquarters at the Florence home office in Gardner, Mass.

The Trageser Copper Works, Inc., Maspeth, Long Island, N. Y., announces the appointment of E. T. Rasmussen to take charge of the company's gas cylinder sales, succeeding W. L. Hauck.

A. W. Conley, president of The Coroaire Heater Corp. and subsidiary, Hot Boy, Inc., announced the appointment of Edward D. Jackson as sales manager for both companies.

He will direct the national sales of the Coroaire line of gas-fired heating and winter air-conditioning units, and the Hot Boy space heaters.



Sell the water heater that provides "Packaged-in-Glass" Hot Water

No Rusting! No Corroding! Under any water condition, the all-modern *Permaglas* Water Heater CANNOT rust or corrode! It's ever ready with all the hot water, needed, for even the newest homes, pure and clean as the source itself.

Permaglas

SMITHWAY WATER HEATER

The *Permaglas* Water Heater has the tank of glass-fused-to-steel—mirror-smooth and sparkling blue. Rust that ruins clean laundry . . . and corrosion dirt that stains both water and porcelain . . . are banished.

There's Only ONE "*Permaglas*"—a Great Aid to Sales

Only A. O. Smith offers you the automatic water heater that's *new*. The "*Permaglas*" sales story is the newest and most dramatic in the appliance business. Get all the facts now on this new discovery about hot water.

Write the nearest A.O. Smith office for "The Inside Story of *Permaglas*!"

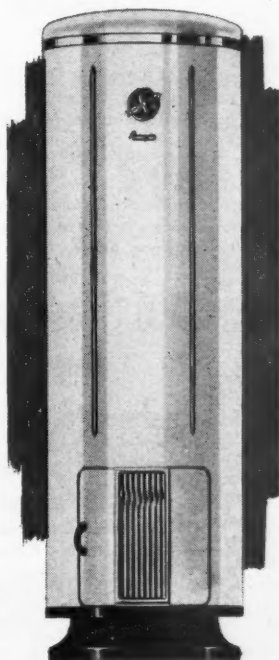
HEATED WITH GAS • STORED IN GLASS!
HOT WATER "Packaged-in-Glass"



A. O. SMITH

Corporation

New York 17 • Atlanta 3 • Chicago 4 • Houston 2 • Seattle 1
Los Angeles 14 • International Division: Milwaukee 1
Licensee in Canada: John Inglis Co., Limited



Now Available

**Comprehensive
PUBLIC LIABILITY
INSURANCE**

A policy completely covering all hazards for which the operator, distributor or dealer might be liable, or assume under contract.

•

Also

**Motor Vehicle Coverage
and/or
Workmen's Compensation
Coverage**

•

See Butane-Propane News, March 1946, Page 19, and September 1946, Page 82, for complete explanation of coverage.

•

Have your insurance agent write us for free Application Blank covering all questions to be answered in connection with coverage you desire.

LOUIS H. COLLAR
Manager
**Liquefied Petroleum Gas
Insurance Underwriters**

OFFICE ADDRESS
1104 Insurance Exchange Building
Kansas City 6, Mo. Phone: Victor 7460

HOME ADDRESS
1913 Tauromee Ave., Phone: DRexel 3331
Kansas City 2, Kansas

Synthetic Fuels Project Would Use Coal as Base

Cooperation of the oil industry and coal interests in a \$120 million project to extract gas, high octane gasoline and fuel oil synthetically from coal has been announced jointly by Standard Oil Development Co. and Pittsburgh Consolidation Coal Co., co-sponsors.

The project, which may conceivably yield enough gasoline for more than 3,000 years' consumption, will begin with construction of a \$300,000 pilot plant at Library, Pa., where a new synthesis process will be evaluated. If the process proves commercially feasible, a giant \$120 million plant will be built.

The pilot plant will be completed by the end of this year, and charging stock will be withdrawn from extensive holdings of the coal firm at the site. Construction of the large plant will commence by the end of 1949, with commercial production scheduled for 1951.

The initial plant is expected to produce 2.4 million cubic feet of gas suitable for synthesis into liquid fuels and a gas fuel, from a daily consumption of about fifty tons of coal.

Robert P. Russell, president of Standard Oil Development Co., pointed out that if only half of the estimated coal reserve of 3.18 trillion tons can be used for synthesis, coal could represent a potential gasoline reserve of 3.7 trillion barrels, or enough to last more than 3,000 years.

Illinois Bottled Gas Co. Has 728 at Convention

The Illinois Bottled Gas Co., Chicago, resumed its "Dri-Gas" dealer conventions at the Morrison hotel in Chicago, April 2, with a registered attendance of 728. An all-day business

meeting was held in the Terrace Casino room, with the adjoining Monte Carlo room attractively set up with appliances and equipment of participating supplier companies.

The program was opened by B. D. Geroy, General Manager of the company, with a short talk on "What's Ahead for Dri-Gas." Presentations followed throughout the day on a carefully pre-arranged schedule. These messages of instruction and product enlightenment were delivered by D. W. Bennett, manager of service and engineering, Illinois Bottled Gas Co.; F. A. McFerran, general sales manager, Ruud Manufacturing Co.; Ralph Engstrom, sales and service engineer, Bastian-Blessing Co.; Walter H. Miller, sales manager, bulk service division, Illinois Bottled Gas Co.; A. D. Howard, assistant sales promotion manager, Servel, Inc.; Leland M. Fei-

gel, sales manager, water heater division, Servel, Inc., and Carl Sorby, vice president and sales promotion manager, Geo. D. Roper Corporation.

In addition to the foregoing companies, the following affiliated firms were represented or maintained displays: Malleable Steel Range Co., Bryant, Coro-Aire, Safe-Aire, Porto-O-Stove, and United Petroleum Gas Company.

Ray Lindahl, sales promotion manager, directed the program.

McAlester Branch Established For Gaines Butane

Gaines Butane Equipment Co., Okmulgee, Okla., is erecting a new storage plant which will cost \$30,000, it is announced by Clifford Walker who will manage the company's operations at McAlester.

500 to 1000 lbs. LP Gas saved per tank car wherever Brunner units operate

Liquid Petroleum Gas operators using the Brunner LP Gas Unit recover 500 to 1000 lbs. of gas from every tank car unloaded. This saving alone quickly pays for the initial cost of the Brunner self-contained unit. And because LP Gas is a necessity in many industrial areas, this gas saving is important as a conservation measure.

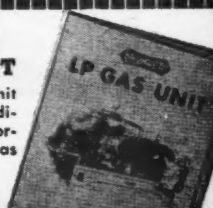
BRUNNER MANUFACTURING CO.
UTICA 1, NEW YORK, U. S. A.



BRUNNER LP Gas self-contained compressor unit, 4 cylinder, 5 hp.

WRITE FOR THIS NEW FREE BOOKLET

It describes the Brunner LP Gas Unit and contains more illustrations, diagrams, tables and valuable information on the handling of LP Gas than any booklet ever issued.



BRUNNER
SINCE 1906

If your men are forced
to stand around like this-



because your pumps are
slow and inefficient . . .

**Then Don't Waste Time
Investigate
VIKING ROTARY
PUMPS . . . Today!**

It's Viking for fast and positive
delivery, no pulsation, depend-
able long life.



*Write for special
Bulletin Series 2300B.
It will be sent to you by
return mail.*

See Our
Catalog In
SWEETS

VIKING
Pump Company
CEDAR FALLS, IOWA

G. G. Oberfell Honored by University of Tulsa

The contributions of Dr. G. G. Oberfell in the petroleum research field were recognized May 27 when he received an honorary doctor of science degree from the University of Tulsa at the university's 50th commencement exercises.

Dr. Oberfell is vice president in charge of research and development and a director of Phillips Petroleum Co., Bartlesville.



G. G. OBERFELL

A native of Ohio, he was educated at Miami University, Oxford, Ohio, the University of Chicago, and the University of Pittsburgh. He taught in Miami University's chemistry department and in Ohio rural schools.

Since 1925, Dr. Oberfell has been with Phillips, first as director of research, and since 1933 vice president in charge of research and development. He has directed and conducted research in such fields as carbon-black manufacture, drilling-mud additives, copper sweetening and catalytic desulfurization, volatility control of motor fuel, and the charcoal-adsorption testing method. In 1939 he received the Hanlon Award presented by the Natural Gasoline Association of America.

Will Use Radio to Sell Users Larger Storage Tanks

A series of educational meetings of LP-Gas dealers over the state, ending at Oklahoma City, Okla., May 13, sponsored by the Oklahoma Liquefied



A distinguished new member joins the RHEEM Heating Family

THE FRASER FURNACE LINE . . .
for twenty-five years one of the leaders in the gas heating field—has joined the famous Rheem group of heating products. The merging of these two great heating lines will bring to both the advantages of expanded production facilities and wider design experience.

The Fraser line will be made up of the same extensive group of floor and basement furnaces, winter air-conditioning units, blowers, registers and grilles. And Fraser will continue with its present sales policy. The traditional high quality of Fraser products will be maintained and improved as new engineering developments are made.

To the present family of Fraser distributors and dealers, the Rheem organization extends a warm welcome. To future dealers, the Fraser division of Rheem offers a complete line of heating equipment, designed to give lasting satisfaction through the latest developments in heating engineering. Rheem, 570 Lexington Avenue, New York 22, N. Y.

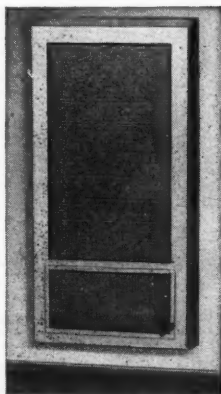
RHEEM . . . making houses into homes



Williams Vented WALL WARMOLATOR

for New Residences.

*For Butane, Propane
or Natural Gas.*



Dual type, 45,000 B.t.u. input.

Color, light ivory. For 2 x 4 studs.
For manual control only for L.P. gas.

Easily installed—Easily accessible.

No pit or basement A.G.A. Approved.
Eligible for F.H.A. loans.

Size of face 25 1/4" wide, 50" high.

Size of recess in walls, 23 3/4" x 48"
high. Projects from wall, 4 inches.

Ask for Circular, Form 216

WILLIAMS RADIATOR COMPANY

"Sponsors of better heating since 1916"

Sales office: 3115 Beverly Blvd.
Los Angeles 4, Calif.

Factory: 1821 Flower St.
Glendale 1, Calif.

Petroleum Gas Association, resulted in the launching of a radio and magazine newspaper advertising campaign in Oklahoma to promote the idea of larger consumer tanks.

A fund was raised which will be used to conduct daily programs on 11 Oklahoma radio stations and to carry advertising in state farm papers during the months of June, July and August. A committee of the Oklahoma LP-Gas Association has prepared and will provide convincing facts upon which the programs and the advertising copy will be based to show advantages to the users as well as to the dealers in installing larger consumer tanks.

A chief objective will be to prevent customers of the LP-Gas dealers, who cooperate, from experiencing gas shortages next winter by providing larger storage capacity on their premises and by having their tanks filled during the late summer or early fall.

Advertising and educational material also will be placed in the hands of cooperating dealers for circulation among their customers and for incorporation in local newspapers in connection with their local advertising.

The campaign has the backing of leading tank and equipment manufacturers and of refiners of liquefied petroleum gases in Oklahoma and surrounding states.

New Technical Bulletin Announced by CNGA

M. W. Kibre, president of California Natural Gasoline Association, Los Angeles, has announced the completion for publication of TS-461, "Tentative Standard Procedure for the Determination of Superexpansibility and Manometer Factors Used in Measurement of Natural Gas by



**A SYMBOL OF QUALITY
ASME U-69 EXCLUSIVELY USED
UL FITTINGS-CRITERION GAUGE**

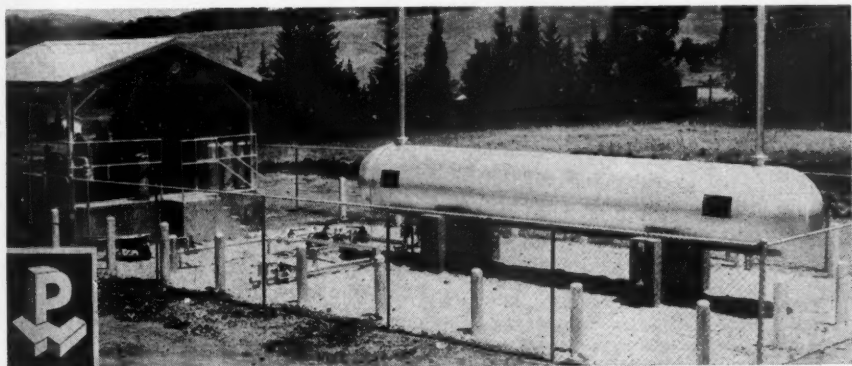
*The name DELTA has become a symbol
of quality in the Liquefied Petroleum
Tank Industry.*

Finest quality materials, skilled master craftsmen and modern precision designed equipment assure DELTA customers of the finest in L. P. Gas Equipment for transport or storage.

DELTA'S production ability is constantly being improved to meet the demands of the future and to restore, as soon as adequate materials become available, the full volume production so critically needed to meet the future's urgent requirements.

DELTA TANK MANUFACTURING CO., INC.

P. O. Box 1469, Baton Rouge, La. • P. O. Box 1091, Macon, La.



Typical Parkhill-Wade LPG Packaged Plant recently completed for Mutual Liquid Gas Co. at Agoura, Calif. This is one of the standard pre-fabricated plants now available to dealers everywhere. There are 31 designs ranging from 2000 to 100,000 gals., ready for immediate selection. Plants are ordered under design number . . . Built to stock pattern . . . Ready for assembly on arrival . . . Delivery in 30 days.

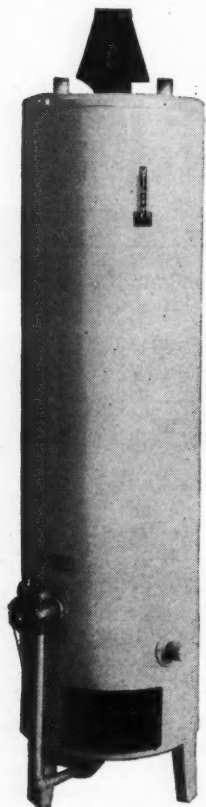
Also available are small, portable units from 276 to 986 gals. for use as auxiliary plants at filling stations, bottling plants, farms, construction jobs, etc. For complete details write for illustrated folder.

**L.P.G. DIVISION
PARKHILL-WADE**
5017 E. Anaheim-Telegraph Road
Los Angeles 22, Calif.

The UTILITY

Designed Especially
for L.P. Gas

The Utility is a compact automatic storage water heater engineered to meet the needs of the L.P. Gas Industry. Its Design-Styling-Finish gives you:



Quality



Beauty



Dependability



Satisfaction



Sales Appeal



IMMEDIATE
DELIVERY

UTILITY SUPPLY COMPANY

P.O. Box 365

Fresno, Calif.

Phone: 4-6349

Orifice Meter at Pressures in Excess of 500 psig."

Under the direction of E. P. Valby, chairman of the Technical Committee, a joint committee consisting of the California Natural Gasoline Association, Pacific Coast Gas Association and the Southern California Meter Association, compiled the data to supplement Bulletins TS-353, TS-354 and TS-402. It is felt that this bulletin will fulfill the need for supplemental superexpansibility factors and manometer factors created by the advent of metering installations measuring gas at pressures in excess of 500 psig.

This bulletin is now in the hands of the printers and will be available for distribution in July.

George Kelley Will Direct UDI Service School

George Kelley, safety engineer for the Utilities Distributors, Inc., Portland, Maine, has taken over the duties of educational director for his company in place of Earle A. Clifford, who has been granted a leave of absence to act as chief instructor for the National L-P Gas Institute, Tulsa, Okla. (See June issue *BUTANE-PROPANE News*.)

Mr. Kelley will be assisted by members of the service engineering staff. In addition to his duties as head of the company service school and acting as safety engineer, Mr. Kelley will also continue as industrial manager and supervisor of field service.

Plan LP-Gas Training Course At University of California

The West Coast Office of LPGA has been working with the University of California Extension Division to offer a comprehensive training course in

Always "Reddy" for Instant Use

PIPE-TITE-Stik

PIPE JOINT COMPOUND

in Stick Form

GOING OVER BIG!



POSITIVE SEAL

—for

BUTANE, PROPANE, Gas Oil, Gasoline, Water, Air, Steam, Acid, Freon, Methyl Chloride, Brine, etc.

WONT DRY OUT

HANDY AS A PENCIL

Contains No Lead. Contains No Injurious Ingredients.

NO MESS

NO BRUSH

NO WASTE



Patented Sept. 1947

"Reddy"

Order from your Dealer or write us

for FREE SAMPLE

LAKE

CHEMICAL COMPANY

Originators of Pipe Joint Compound in Stick Form
628 N. WESTERN AVE. CHICAGO 12, ILL.

PROPANE GAS SYSTEMS

ABOVEGROUND OR UNDERGROUND

ASME U-69 CONSTRUCTION 200 LB. WORKING PRESSURE
NATIONAL BOARD INSPECTION

110 Gallon	24" Dia. x 63"	Cylindrical	458 lb.
150 Gallon	24" Dia. x 86"	Cylindrical	574 lb.
250 Gallon	30" Dia. x 90"	Cylindrical	999 lb.
350 Gallon	41" Dia. x 77"	Hemispherical	998 lb.
400 Gallon	41" Dia. x 86"	Hemispherical	1122 lb.
500 Gallon	41" Dia. x 104"	Hemispherical	1347 lb.
750 Gallon	41" Dia. x 151"	Hemispherical	1925 lb.
1000 Gallon	54" Dia. x 122"	Hemispherical	2590 lb.
1400 Gallon	54" Dia. x 164"	Hemispherical	3655 lb.
1650 Gallon	54" Dia. x 190"	Hemispherical	4274 lb.

All Systems Complete For Installation With:

MULTIPLE HEAD	REGULATOR	PRESSURE GAUGE
FILLER VALVE (SEPARATE RISER)	RELIEF VALVE	VAPOR RETURN VALVE
HOUSELINE VALVE	EXPANSION COIL	CRITERION GAGE

GENERAL TANK COMPANY, INC.

7200 FOREST BLVD. EAST ST. LOUIS, ILLINOIS P. O. BOX 206
EAST 2840

the various phases of liquefied petroleum gas, its characteristics and applications. The subject matter would be presented in as simple, yet as practical a manner as possible by experts from the LP-Gas business, appliance business, utilization equipment manufacturers as well as the University staff.

The course would be given on the Berkeley campus and will probably run about three weeks consecutively during the summer months. The emphasis will be on practical applications with enough basic theory and fundamentals to give a proper background.

It is a course for which a need has long existed, it is believed. The actual cost of the course will be nominal. Most of the cost will come in defraying room and board expense during the three or four weeks in Berkeley.

Before announcing a curriculum

and time schedule, Don McNary wants your ideas on the course—what should be offered, what is the best time, how many from your firm might attend, etc. So submit your suggestions to the West Coast LPGA office at 3743 Alameda Ave., Oakland, Calif.

Gas Company Will Sell Wholesale and Retail

S. M. Mapel, owner of the Live Oak (Florida) Gas Co., announces the segregation of his company's operations into a wholesale and retail division.

Ray W. Mapel and D. F. Chandler are now operating the retail activities of the company, including the sale of gas and appliances, and the servicing of equipment. Mr. Mapel will devote his attention to the wholesale field, handling bulk sales and the wholesaling of appliances.

DISTRIBUTORS FOR



The
BASTIAN-BLESSING
Company

**PRESSED
STEEL
TANK**



**BUTANE-PROPANE
CYLINDERS**

Also **TAYLOR
GAGES**

**IMPORTANT! Integrity . . . dependability
. . . quality of products. These are the im-
portant things to us . . . and to you.**



**GAS EQUIPMENT
COMPANY, Inc.**

P. O. BOX 566
2620 South Ervay « DALLAS, TEXAS





PROPANE STORAGE TANKS...

fabricated BY DOWNTOWN
IRON WORKS, INC.

This Propane Storage Tank is another example of Downtown Iron Works' ability to handle plate fabrication. All tanks fabricated by us are built to A.S.M.E. specifications and comply with Hartford and National Board of Fire Underwriters' requirements. Our more than 30 years' experience is at your service . . . consult us.

NEW YORK OFFICE: 30 CHURCH ST.

DOWNTOWN IRON WORKS
DOWNTOWN, PA.
WELDED and RIVETED PRODUCTS

DISTRIBUTORS FOR



The
BASTIAN-BLESSING
Company

**QUALITY L-P GAS
EQUIPMENT**



Also—
**TAYLOR
GAGES**

**PRESSED
STEEL
TANK**



**BUTANE-PROPANE
CYLINDERS**



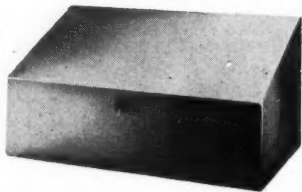
GAS EQUIPMENT SUPPLY CO.

127 ELLIS ST. N. E.

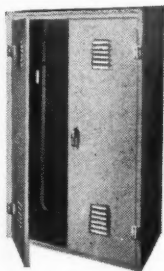
ATLANTA, GA.

OXFORD Bottled Gas Cabinets

*Hood
Type*



Cabinet Type



**FOR
LONG
and
DEPENDABLE
SERVICE**

For that **extra** protection against severe weather and accidents, install Oxford Bottled Gas Cabinets. Thousands of Full Size, Single Hood and Double Hood types are giving unparalleled service throughout the country. Constructed of heavy metal with a protective coating of paint or galvanized to insure rust resistance. Cylinders, valves, regulators, etc., are fully protected. Write for prices and details.

The Oxford Company
Oxford Penna.

New Trade Mark Law

IN July, 1947, the Lanham Act will go into effect, according to a bulletin issued by the Liquefied Petroleum Gas Association.

This act, by providing more flexible standards in the selection and handling of trademarks is of prime importance to trademark owners. This act, of course, does not affect existing state registration statutes or trademarks used only within the borders of a single state. Nor does it make registration a prerequisite to protection against use in unfair competition.

The new act provides, in substance:

(1) Nationwide protection and consequent greater security for owners.

(2) Constructive notice of ownership through registration. Conversely this requires alertness to challenge infringement. Once federal registration is made, there is only one lawful user nationally and a company that fails to register will have no protection outside the state wherein they were the first user.

(3) A private action for infringement.

(4) The prospect of incontestability though 5 years user. (Certain exceptions are made).

The new act will permit the registration, not permitted by the old act, of:

(1) Names of relatively little geographic significance.

(2) Corporate names.

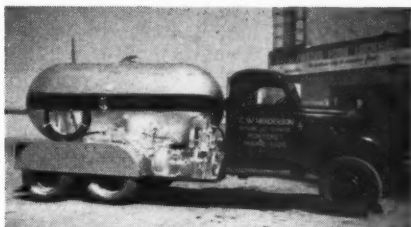
(3) Service marks.

(4) Collective marks. (Used by an association or other collective group.)

(5) Marks not affixed to goods.

Mere descriptive marks apparently will continue to be disallowed but the new act does provide for the protec-

PROPANE DELIVERY



A 1200 NET GAL. PROPANE TRUCK TANK BUILT FOR BUTANE GAS SERVICE,
MONTEREY, CALIF.

By

SUPERIOR TANK & CONSTRUCTION CO.

6155 SOUTH EASTERN AVENUE

LOS ANGELES, CALIFORNIA

Phone ANgelus 4157

Designed for LP GAS

NEW ALL ALUMINUM

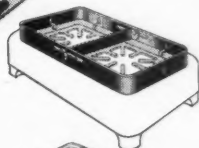
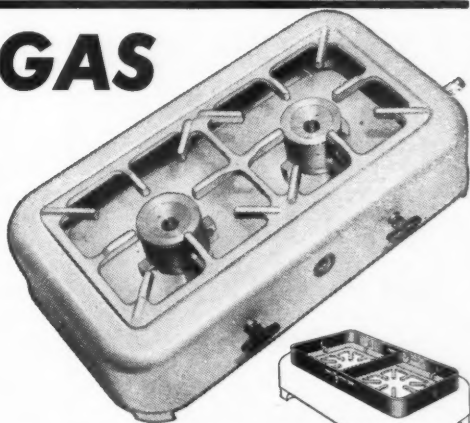
PORT-O-STOVE

You can take it with you wherever you go, or install it permanently. Takes little space. Uses Butane or Propane with equal satisfaction. Weighs only 5¾ pounds!

Guaranteed against mechanical and material defects. Write for particulars today!

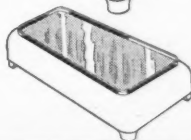
**ART METAL
APPLIANCE CO.**

3106 PARK AVE., ST. LOUIS 4, MO.



Guard Rail attachment for use on trailers, yachts, or at lively picnics, beach parties. Prevents utensils sliding.

Griddle attachment holds three times amount ordinary size frying pan. For hamburger stands, taverns, hunting or fishing trips.



PROPANE

If You Are Seeking—

- 1—A DEPENDABLE SOURCE
- 2—A UNIFORM PRODUCT
- 3—A CAPABLE SUPPLIER
- 4—AN EXPERIENCED MANUFACTURER

Then inquire—

Cities Service Oil Co.

In Propane also
CITIES SERVICE
means
GOOD SERVICE

CITIES
Service Oil Co.
(Delaware)

BARTLESVILLE, OKLAHOMA
CHICAGO, ILLINOIS

Other Sales Offices

Cleveland
St. Paul

Kansas City
Toronto

tion of descriptive terms that have acquired a distinctive, exclusive trademark meaning.

There are two prerequisites to registration: (1) first user and (2) use in interstate commerce. (The new act provides for concurrent registration in cases of simultaneous use in different parts of the country).

Marks now registered do not automatically receive the benefits of the Lanham Act, or is it necessary to re-register. However, if it is desired to secure the benefits of this act, marks must be re-published. Many trademarks which could not previously be registered may now be registered. They should be re-examined to determine if they can be registered under this act.

New LP-Gas Law Will Bring Better Inspection in Oklahoma

A liquefied petroleum gas division of the State Fire Marshal's office is created under Senate Bill 208, enacted by the Oklahoma Legislature, which adjourned recently.

The division is composed of three members appointed by the Governor. It will act in an advisory capacity to the fire marshal in administration of the laws affecting the sale, handling, installation and distribution of liquefied petroleum gas. The division members will be appointed when the bill becomes effective on July 1.

The number of inspectors is increased from 2 to 4 and adequate funds are provided for salaries and traveling expenses of the inspectors. Under the old law appropriations were insufficient to provide for more than two inspectors with very limited traveling expenses.

Fred Yates, executive secretary of the Oklahoma Liquefied Petroleum Gas Association, expects the new law

BRILLIANT FIRE HEATERS

TO those alert appliance dealers who would offer the trade the *most* Heating Satisfaction at the *least* Servicing Expense . . . and who desire to give the *most* Heating Comfort for minimum fuel investment . . . it's time to file commitments *now* for **BRILLIANT FIRE L-P Gas Heaters**. Orders for seasonal deliveries on this broad-range *Pioneer Line* are being scheduled in the order of their receipt.

Write for catalog and distributors' name today



THE OHIO FOUNDRY & MANUFACTURING CO.
Engineers • Manufacturers • Designers
STEUBENVILLE • OHIO • U.S.A.
ESTABLISHED 1846



CLIP THIS AND MAIL TODAY

if you are not a subscriber to
BUTANE-PROPANE NEWS

1709 W. Eighth Street, Los Angeles 14, Calif.

SUBSCRIPTION ORDER

Enter my subscription to **BUTANE-PROPANE NEWS** to begin with the next issue.

1 Year \$2.00 ☐ **3 Years \$5.00** ☐

Check enclosed ☐ *Please send bill* ☐

NAME _____ POSITION _____
 COMPANY _____

STREET

CITY

ZONE

STATE

Quality and Service

For All Your L. P. GAS EQUIPMENT



CARBURETION, HOSE
HOSE REELS
VALVES, COUPLINGS
TUBING FITTINGS
TANK FITTINGS
HEATER & RANGE
CONNECTORS
TRUCK & STORAGE PUMPS
ROPER-VIKING
METERS FOR
TRUCK & BULK PLANTS
COMPLETE STORAGE &
DISPENSING SYSTEMS

Our equipment prices are competitive for like quality and quantity.

WE WELCOME YOUR INQUIRIES
ON CARBURETION PROBLEMS

ACME EQUIPMENT CORP.

313 So. Pearl St., Dallas 1, Texas
Phone Riverside 4089

to greatly improve enforcement of the present regulations and to enable inspectors to cover a much wider field. The new law is also expected to aid in raising the standard of the industry by helping to eliminate irresponsible or fly-by-night operators. A provision of the new law which requires every LP-Gas dealer to give a bond is expected to promote this objective.

Multicolumn Distillation of Natural Gasoline Discussed

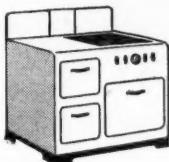
"It is recommended that in a new plant, the ethane-and-lighter fractions of natural gasoline be removed in the first column of the distillation series," Dr. Frank J. Lockhart, assistant professor of chemical engineering at the University of Southern California, told members of the California Natural Gasoline Association assembled at the Rio Hondo Golf Club for their monthly meeting, May 1.

If propane, isobutane and normal butane are also to be separated, he stated that in general the separation should be made in successive columns; but pointed out that under certain circumstances other sequences of operation might be more economical.

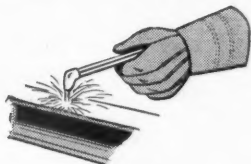
Taking as an example a case in which propane, isobutane and a 30 pound Reid vapor pressure natural gasoline were to be produced from a de-ethanized feed stock, Dr. Lockhart showed that the operation could be carried out in two ways. The feed can either be first depropanized, then separated into isobutane and a 30 pound product; or the 30 pound product can be made in the first column, and the propane-isobutane mixture taken overhead and condensed, then separated in a second column.

Dr. Lockhart compared the processing cost per 1000 gallons of feed for the two methods. By means of a chart

There's a STANDARD L-P Gas for You



Flamo Gas . . . For stoves, water heaters, refrigeration, brooders and space heaters . . . in a wide variety of domestic, light industrial and commercial uses.



Pro-Gas Fuel . . . A propane product. Bulk delivery for domestic, commercial and industrial use. Meets requirements of steel cutting, annealing, brazing, stress relieving, flame cultivation.

Calol Industrial Gases . . . Designed for utilities manufacturing gas distributed through gas mains.

Trademarks: "Flamo, Pro-Gas, Calol" Reg. U.S. Pat. Off.

STANDARD OF CALIFORNIA PRODUCTS

You need



PYRAMID
STORAGE TANKS
"Better Buy"



PYRAMID TANKS are made of A2-12 High Tensile Steel . . . ASME Code U-69 Construction. Every System is inspected by a National Board. You NEED Top Notch LP-Gas Equipment . . . and PYRAMID is the BEST BUY. PYRAMID LP-Gas Equipment is ALWAYS DEPENDABLE.

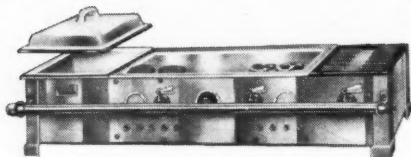
Wire — Write — or call LD-11 for Further Information

PYRAMID MANUFACTURING CO., INC.

BOX 1828

ALEXANDRIA, LA.

Fast Sales!



MEXIHOT BARBECUE SANDWICH MACHINES

Thousands of installations in drug stores, tap rooms, roadside stands, cafes and other places that serve lunches have brought big repeat business. Low price means quick sale. Above model \$79.50, other sizes in proportion. Write for distributorship at once.

Copyrighted 1947

Department B-7

DICKERSON MANUFACTURING CO.
Springfield, Missouri

*Complete
Stock*
**UTILITY
LPG SYSTEMS**
Ready for
Immediate Delivery
- ALL SIZES -
Call
Albert White

H-2146 or LD-140

BUTANE EQUIPMENT CO., INC.

3301 S. Lamar

Dallas, Texas

he showed that one or the other might be most economical depending upon the total quantity of propane and isobutane in the feed, and the ratio of the volume percent of propane and isobutane. Similar charts were presented for the other separations.

In sizing columns for his cost comparisons, Dr. Lockhart made use of a hitherto unpublished short cut method of estimating the number of plates required. It is based upon a simplified form of the Brown and Martin and Gilliland correlations, and is accurate for most cases found in industry.

L. L. Meier Named Sales Mgr. Of United Liquid Gas Co.

Appointment of Louis L. Meier as sales manager of the United Liquid Gas Co., of Fresno, Calif., has been announced by Gilbert Bragg, president.

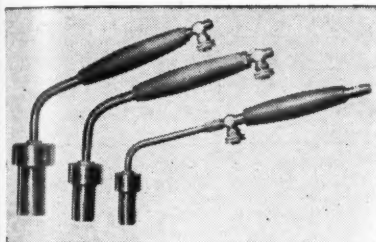
Mr. Meier comes to this company with a background of experience in sales and service in the appliance and utility field, having spent several years with the James Graham Manufacturing Co. and was formerly sales representative for the American Stove Co. in San Francisco and the San Joaquin Valley.

Prior to 1930, Mr. Meier served in both the sales and service departments of the Southern California Gas Co., and was sales supervisor of the San Joaquin Valley Division of that company.

South Atlantic Gas Co. Moves to New Location

The Sanford, Fla., South Atlantic Gas Co. has moved its sales department and office from its old location on Park Avenue to 106 Palmetto Ave., it is announced by John W. Schroeder, Jr., district representative.

F & E



Hand Torches (Available in 6 Different Sizes)

Superior for Melting Out Lead Joints
"Sell Tomorrow's Equipment Today"

A complete line of burners, torches and fire pois.

F & E MANUFACTURING CO.

P.O. Box D

Centerville, Calif.

C AND S

MAGNETIC TYPE

**LIQUID LEVEL
GAUGES**

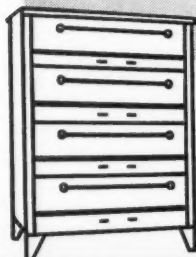
ACCURATE
STRONG
LEAKPROOF

AVAILABLE IN
JUNIOR AND
SENIOR SIZES

C AND S MANUFACTURING & SUPPLY CO.

700 COMMERCE ST. DALLAS 2, TEXAS

Heat-Controlled
**BAKING GIVES
 BETTER RESULTS**
at lower fuel cost



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 LPG Loads**

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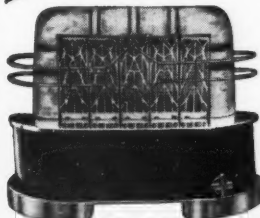
THERMOSTAT COMPANY

Youngwood, Pa.

COMMERCIAL & INDUSTRIAL DIVISION



ARMSTRONG



"when it's an
 Armstrong ...
 depend on it
 ... it's the
 finest of its
 kind"

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No. 1690 is a popular seller because it is good to look at and will add to the comfort of any room in the House. Produces a clean, dry heat. Brown vitreous enamel finish. 17 $\frac{3}{4}$ " high, 20,000 or 24,000 B.T.U.

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Quality Since 1899

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Free to World War 2 Veterans: Situation wanted ad for three successive months.

HELP WANTED

QUALIFIED MAN FOR GENERAL OFFICE manager in a combined LP-Gas, plumbing and heating concern. Opportunity for advancement. References required. Give details in first letter. Raymond E. Garvey, 111-113 South Suffolk St., Ironwood, Michigan.

WANTED—MEN CONTACTING BOTTLED Gas dealers, distributors, plumbing and refrigeration accounts. Sell FLARON line of Brass fittings, tools, tubing. Good prices and we deliver. Excellent proposition. Write Schaaf Bros., Inc., Osborn, Ohio.

MANAGER CALIFORNIA GAS COMPANY with city mains and bottles for country service. Company-owned home available. Write Box 85, BUTANE-PROPANE News, 1709 W. 8th St., Los Angeles, Calif.

EXPERIENCED MAN FOR LP-GAS installations and service work in central Pacific Coast area. Prefer man under 40. Good salary. State age and previous experience in reply. Box 90, BUTANE-PROPANE News, 1709 W. 8th St., Los Angeles, Calif.

SITUATIONS WANTED

YOUNG MAN WITH EXPERIENCE IN operations and sales of bottle gas dealer organization and bulk deliveries. Now employed as District Manager. Seeks connection with progressive LP-Gas organization. College graduate. Address Box 80, BUTANE-PROPANE News, 1709 W. 8th St., Los Angeles Calif.

2 YEARS EXPERIENCE LP-GAS delivery, installations, service, and plant maintenance. Prefer Washington, Oregon, or Northern California. Write Box 65, BUTANE-PROPANE News, 1709 W. 8th St., Los Angeles, Calif.

ARE YOU SEEKING A MAN WHO CAN successfully manage your Butane-Propane business, with full knowledge of sales, advertising, buying, domestic and commercial installations, fuel route operation, carburetion, bulk plant and transport operations?

My experience as a responsible executive with a large LP-Gas operator can be mutually beneficial. Age 30, married, veteran, Protestant, college training and a good background of successful LP-Gas management. Prefer eventual part ownership, Texas or Southwest. May I discuss it further with you? Box 375, BUTANE-PROPANE News, 1709 W. 8th St., Los Angeles 14, Calif.

BUSINESS OPPORTUNITIES

FOR SALE—OLD ESTABLISHED BUTANE-PROPANE business, selling fuel and appliances. Franchise covering nationally advertised ranges, refrigerators and other appliances. Located Texas town about 30,000 population. First quarter trial balance netted partners for January, February, and March, 1947, \$6,113.58. Will do better for remainder of year. About \$45,000 net in clean merchandise, new trucks and real estate. We ask \$60,000 cash for this business. Write Box 70, BUTANE-PROPANE News, 1709 W. 8th St., Los Angeles 14, Calif.

THE BUTANE BUSINESS IN TEXAS, appliance store in Texas, and Butane Business in Louisiana, complete with ample storage, transport, and delivery truck at less than cost. All three are real money-makers. Sell together or separately. Address replies to P. O. Box 467, Beaumont, Texas.

FOR SALE — LP-GAS AND APPLIANCE business in important agricultural county in California. (Land, building, storage tanks, trucks). Excellent appliance franchise. Gross business 1946, \$118,000.00. Large future potential. Ample room for expansion and other business highway frontage. \$45,000 will handle. Write Box 365 BUTANE-PROPANE News, 1709 W. 8th St., Los Angeles, Calif.

FOR SALE—BUTANE-PROPANE GAS AND Appliance Business, located in two west Arkansas towns of 5000 population each. Doing annual business of \$200,000. 36,000-gallon storage. One late 1946 model 4000-gallon 2½-ton trailer transport, three late 1946 model gas delivery trucks, 1300-gallon capacity each. Three late model service trucks; all equipment operating on Butane with Ensign carburetion. Have large number skid tanks already located on industrial jobs. Storage is located on railroad. This territory has no natural gas. Business at this time inventories \$86,000. Reason for selling—Owners have other business. If interested contact Box 355 BUTANE-PROPANE News, 1709 W. 8th St., Los Angeles, Calif.

OPPORTUNITY FOR UNUSUAL INVESTMENT in a successful going Butane business. \$50,000.00 will give right party ¼ interest; \$100,000.00 ½ interest, in a large Butane and general merchandising business that will, after expansion program is completed, do over 1½ million dollar annual business. Located in one of the south's healthiest and prettiest sections. Write box number 350, BUTANE-PROPANE News, 1709 W. 8th St., Los Angeles, Calif.

BUSINESS OPPORTUNITIES—Continued

FOR SALE—LEADING BUTANE-PROPANE Gas and Appliance Business, located in rich farming and industrial section of Arkansas. Enjoying nice business. Old established company. Plenty of gas. Five trucks. Franchises leading appliances. Experienced service men. Owner retiring. Write **BUTANE-PROPANE News**, Box 360, 1709 W. 8th St., Los Angeles, Calif.

FOR SALE—SMALL BOTTLED GAS BUSI-ness, located at Hot Springs, Arkansas. Selling 65,000 to 60,000 pounds yearly. 110—100-lb. I.C.C. Cylinders, 1939 Ford ton truck. All equipment in good condition. Established 10 years. Totally disabled veteran unable to handle. Sacrifice price, \$3,000.00 cash. Write Box 370, **BUTANE-PROPANE News**, 1709 W. 8th St., Los Angeles, Calif.

FOR SALE—INDEPENDENT LIQUEFIED Petroleum Gas and Appliance Business, well established, franchise covering three counties: all assets, plants, equipment, merchandise. Price \$100,000; terms \$55,000 cash. **AMADOR REALTY COMPANY**, Jackson, California.

BUSINESS SERVICES

WE CAN BE YOUR ENGINEERING DE-partment. L.P.G. designs and drawings to meet state requirements—Data and drawings to aid in securing underwriters' listing—Gauge tables. **Alpha Engineering Co.**, P.O. Box 475, Baton Rouge, Louisiana.

MISCELLANEOUS FOR SALE

L.P.G. ADVERTISING GIFTS—MINIATURE aluminum salt and pepper shakers made as scale models of L.P.G. spheres or tanks. Are now available in any two-color combinations with or without dealer's name inscribed. Write Box 95, **BUTANE-PROPANE News**, 1709 W. 8th St., Los Angeles, Calif.

EQUIPMENT FOR SALE

FOR SALE—STOVE ORIFICES, 1/4, 3/8 AND 1/2 Flare Nuts and other L.P.G. fittings. Write **FUELGAS CO.** 5905 N. Saginaw St., Flint, Michigan.

FOR SALE—IMMEDIATE DELIVERY!—Eureka Smokehouse Burner Assemblies! For meat smoke houses using bottled gas. Completely automatic. Clean filtered smoke. Distributes heat uniformly. Low gas consumption. Automatic temperature and pilot control. Less product shrinkage. Easily installed. Write for descriptive pamphlet. **Eureka Equipment Co.**, P.O. Box 396, Beloit, Wis.

WHOLESALE—IMMEDIATE DELIVERY ON Flaron Brass Fittings. Complete line. Tools, tubing, accessories. Good prices. Write **SCHAAF BROS., INC.**, OSBORN, OHIO.

FOR SALE—BUTANE TRANSPORT 3882 water gallon capacity, twin tanks, 125 lb. W.P. U-69 code; 5-ton Reo, Ensign combination carburetor, 18,000 miles, original tires good, straight air, perfect condition, \$8500 complete. **C. G. Berry**, Tahlequah, Oklahoma.

FOR SALE—PROPANE HOTEL RANGE IN original crate. Fourteen top burners, griddle, broiler, three Robertshaw controlled ovens. Purchased direct from manufacturer. Will sell below cost. Box 506, Beecher City, Ill.

FOR SALE—TANKS—FITTINGS—FOR IM-mediate delivery—150-gallon Butane tanks and fittings, also 250 and 500-gallon Propane tanks and fittings. For delivery in 30 days—750-gallon and 1000-gallon Propane tanks and fittings. **Kenney Tank Installation Co.**, 2132 No. Halstead St. Chicago 14, Ill.

41BX MACK 150 CUMMINS DIESEL EN-gine 2855-gal. Propane tank—3 axle. 40 Ace trailer—3 axle 4,000-gal. Butane tank. 41 G.M.C. 3 axle truck, 2,510-gal. Propane tank. 41 Fresno Trailer 2,520-gal. Propane tank. **United Liquid Gas Co.**, P.O. Box 547, Fresno, Calif. Phone 4-3901.

1—123½ W. P. U-69, 3500 W. G. TWIN 46" semi-trailer, high tensile steel, 18,000# trailer, 16½x6" brakes. 1—200½ W. P. U-201, 3600 W. G. single barrel 60" semi-trailer, high tensile steel, 18,000# trailer, 16½x6" brakes. 1—200½ W. P. U-201, 4200 W. G. twin 46" semi-trailer, high tensile steel, 18,000# trailer, 16½x6" brakes. Write for full particulars. **Lubbock Machine Co.**, P.O. Box 1138, Lubbock, Texas.

FLARE FITTINGS AND TUBING—WRITE for our latest descriptive catalog. A complete line of fittings and cocks. Low wholesale prices. Mail orders receive prompt attention. **GENERAL STEEL PRODUCTS CO.**, Box 4703, Atlanta, Georgia.

FOR SALE—NEW ALL-STEEL BUILDINGS. 20'x40'x8', complete with doors, windows and glass. Gable construction. **WESTERN OIL & FUEL CO.**, 227 Colfax Ave. N., Minneapolis, Minnesota.

FOR SALE—NEARLY NEW G.M.C. 1946 1½-ton dual axle truck with 1050 Propane gal. tank complete with Print-O-Meter pump, hose and fittings. **WESTERN OIL & FUEL CO.**, 227 Colfax Ave. N., Minneapolis, Minnesota.

CASH AND CARRY SYSTEMS COMPLETE. B&B #2560 system with two 20½ 4B240 cylinders. Lots of 1/9 systems \$37.07, 10/24 \$35.60, 25/49 \$33.78. Immediate shipments. **G. Fisher**, Churchville, N. Y.

New Firm Organizes In Benton, Ark.

Articles of incorporation for the Benton Butane Gas Co. have been filed with the Secretary of State at Little Rock, Ark.

Incorporators are **H. J. Gingles**, well known Benton merchant; **H. M. Brown**, **C. R. Leech**, **W. A. Ham** and **Lonnie Jones**.

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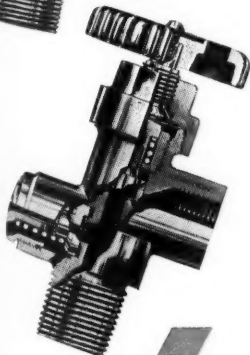
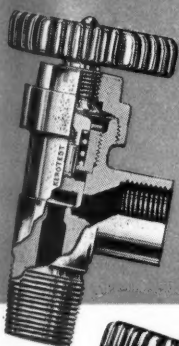
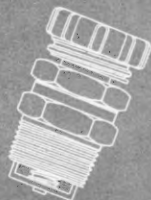
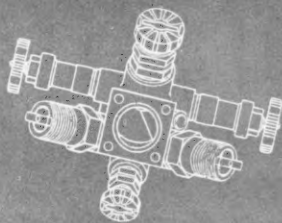
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THE *Quality* LINE FOR LP-GAS DISTRIBUTORS

Produced by one of America's pioneer manufacturers of forged brass valves for the control of high pressure gases . . . the KEROTEST Line of LP-Gas Valves and Fittings offers the utmost in compact design . . . precision safety . . . and economy of original cost and maintenance.



KEROTEST MANUFACTURING COMPANY
PITTSBURGH 22, PA.

AMERICA'S FIRST NAME IN QUALITY VALVES

JUL 7 19

One dollar investment per gallon sold!

THAT is the tremendous total represented in the LP-Gas industry. Latest gallonage sales were over a billion annually. Latest investment figures were over a billion dollars for appliances in three million homes plus distributors' investment in plant and equipment. This does not include refiners' properties.

It's a growing business, too! Like the automobile business in its years of greatest expansion, the LP-Gas business is growing at a rate which promises to double its size in six years.

Essential to goodwill and dealers' profits is equipment of absolute unfailing reliability . . . a requirement which shapes every step in the making of Trageser LP-Gas Cylinders.



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